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ABSTRACT

The title of this volume was the theme of the sixth annual meeting of the Southwest Reading Conference for Colleges and Universities, held in December 1956. Authors of the eleven reports on successful college and adult reading programs focused on various aspects of the programs, including academic performance, program evaluation, faculty, public relations, workbook evaluation, materials for more retarded college readers, and government reading programs. Additional papers discuss programs at a small college, Cornell University, Purdue University, and the University of Texas. Two surveys are included, one concerning colleges and universities in Wisconsin and one concerning reading improvement programs in industry. Two articles deal with recent research in college reading. (JM)

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TECHNIQUES AND PROCEDURES IN COLLEGE AND ADULT READING PROGRAMS

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The

SIXTH YEARBOOK

of

THE SOUTHWEST READING CONFERENCE

for

Colleges and Universities

Edited by

Oscar S. Causey
Texas Christian University

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TECHNIQUES AND PROCEDURES IN COLLEGE AND ADULT READING PROGRAMS

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PREFACE

The title of this volume was the theme of the sixth annual meeting of the Southwest Reading Conference for Colleges and Universities which was held at Texas Christian University December seventh and eighth 1956.

The Executive Committee, in planning for the year's work for the Conference and for the material presented in this volume, desired to bring together in one publication a comprehensive amount of information relating to methods, techniques and procedures used in successful college and adult reading programs and to present reports on recent research that points to ways for further improvement of reading programs. The authors of the reports of the various programs were requested to include details concerning initiation of their programs, placement within the institutions, populating the courses, testing, methods, techniques and procedures used, progress made, evaluation, and other information that would enable the reader of the reports to visualize all elements in the programs. The compilation of the reports on programs provides an opportunity for persons working in the reading field to compare their own work with that of a number of others. Also, persons who have programs in the early stages of development and those who are planning to initiate programs may profit by the experience of others.

The inclusion of reports on research is a continuation of the policy of the Conference to encourage research and to make available the findings of research.

Two surveys are included, one for colleges and universities in one of the states and one of national scope that shows the trend of reading improvement programs in industry.

The value of this yearbook and the success of the Southwest Reading Conference must be credited to the workers in the field of reading improvement who have generously given their time and shared their talents in the preparation and presentation of the material to be found on the pages of this book.

Oscar S. Causey.

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A SMALL COLLEGE READING PROGRAM

Ernest A. Jones
Central State College
Edmond, Oklahoma

In 1952 a study of the reading abilities of entering college freshmen in Oklahoma was completed.-(2) To establish the status of these abilities, scores made on reading sections of various standardized tests that wholly or in part yielded percentile ranks in reading ability, by 8,249 students entering ten Oklahoma colleges and universities during the years 1948 to 1952, were analyzed. All scores were made by persons graduated from Oklahoma high schools and having two or more years of their high school work in that state. Eighty-two percent had all of their public school work in Oklahoma. For purposes of comparison, the scores of 1,459 students entering these same colleges but having their public school work outside the state were analyzed. This study revealed that:

1. Generally those students entering the larger universities and colleges had better reading abilities than those entering the smaller ones.
2. Approximately 63% of entering freshmen had less than average reading abilities, according to the national norms of the reading measures used in the study.
3. Approximately 21% may be considered to have had adequate reading abilities for pursuit of higher education.
4. Approximately one-half of the secondary schools offered some form of formal reading instruction, diagnosis of reading difficulties, or remediation.
5. Generally such reading instruction was conducted in connection with a regular subject-matter class —usually English. Three weeks per semester was the average time allotted.

With further reference to this study, of the 8,249 cases under consideration, 5,168 or 62.62% scored below the fiftieth percentile; 1,359 or 16.47% scored in the 6th and 7th deciles; and 1,722 or 20.88% scored in the top three deciles.

While educationists in general and reading experts in particular consider these tests to be a strong indication of reading ability, it must be remembered that the actual reading ability of any student can be determined only after complete individual laboratory diagnosis.

As a result of this study a reading program was installed at one of the state colleges participating in the study. Its enrollment at the time was approximately 1,200 students. This paper is a description of the procedure used.

During the first semester on campus all freshmen were given a complete reading diagnosis consisting of the Iowa Silent Reading Test. (3), the Michigan Vocabulary Profile Test (4), Keystone Visual Survey Tests (5), Self Analysis of Reading Habit (6), an opthalmograph (7) and spelling test (8). Although the reading clinic did not administer them, audiometer tests, phonetic inventories, and voice recordings while reading were also administered to each freshman. These data were available to the reading clinic.

Each student's data was consolidated on a reading laboratory diagnosis report in triplicate. The original became a part of the student's permanent record in the laboratory. Copies were sent to advisors and to the students. Under the visual analysis section, recommendations were made only as to whether an eye examination was needed by an oculist. No indication was given as to the nature of any defects that might have been indicated. Under recommendations to the student, entries were made as to whether the student should enroll in developmental reading, come to the reading clinic for conference, or to invite him to take advantage of the services to improve his reading, spelling, or study habits.

Scores of 785 freshmen taking this diagnosis over a period of two years were analyzed to obtain the following media scores:

1. Iowa Silent Reading Tests —

Rate percentile	30
Comprehension percentile	25
Grade percentile	28

2. Michigan Vocabulary Profile Test —

Total score percentile	7

3. Metropolitan Achievement Test (spelling, only) —	Grade equivalent	7.1
4. Opthalmograph —	Number of fixations per 100 words	92
	Number of regressions	6
	Average duration of fixation	14
	Average span of recognition	1.3

A letter of transmittal explaining the data was sent to each student with the consolidated diagnosis report. The self-analysis contained fifty questions designed to reveal the student's current reading habits and attitudes toward reading. A pamphlet of fifty corresponding suggestions for improvement, marked according to the student's self-analysis, accompanied the report. The student was directed to pay close attention to the marked items and invited to study all of them. Although this report was self-explanatory and rather comprehensive, many students sought conferences in the laboratory. Many, counselled by their advisors, were channeled into the developmental reading courses.

The developmental reading course which was offered carried an English number, met for five fifty minute periods per week, and earned three hours of elective credit for the student. The first three semesters the course was offered, 107 students enrolled and 98 completed the course.

At the outset it was made clear to the students that there was no magic in the mechanical equipment or the workbooks, nor could the instructor cause the student to read more efficiently. It was further explained that all of these factors would help tremendously, but unless the student had a sincere desire to improve and was willing to work hard toward that end, it was useless to enroll. Time was taken to completely interpret the diagnosis and to answer the questions of students. The attempt was made to assure that each student understood the full implication of his data. The first assignment was to select a full-length fiction-type book with the qualifications that it must be easy for the student to read, and of high interest level to him. He was required to read at least thirty minutes per day, seven days per week until the book was completed. When it was completed, another selection was to be made. This procedure was continued throughout the course. A record form was supplied each student and kept in his laboratory file. On this form he entered, for each book read, the title, number of pages, date started, and date completed. No instructions were given as to how the student was to do this reading at this time. It was revealing how many reported never having read a single book in their lives, and how many said they had not read one in the last year. Careful check was maintained to assure that each student was keeping up this practice reading.

The class activities described hereafter were set up and students participated in them as directed by the instructor. Using the diagnosis data as a guide, the instructor suggested whether the student would do each of these exercises, when, how long, and at what intervals. Some did not need spelling instruction and others could proceed for a time without concentrated vocabulary development, etc. The activities will be described in the order in which the majority of students were assigned them.

Spelling. This instruction began with adult approach to the study of Kottmeyer's film, "Goals in Spelling" (10). This was for those students whose diagnosis revealed an elementary grade equivalent in spelling or any who felt need, regardless of diagnosis. It was suggested that those who felt the need could purchase "Spelling Magic", Books I and II, for outside class work in spelling practice. As new techniques were acquired, instructions were given to include their use during this practice reading. Text assignments were made in "Learning to Spell" (11) and "College Handbook of Composition" (12). Several mimeographed sheets on phonic structural analysis were also used. This work covered a period of two weeks, on the average.

Vocabulary Development. Initial instruction in vocabulary development was started with Keystone's Minnesota Efficient Reading Tachistoslides (13). These were projected and studied in detail until the students had learned the fourteen words containing the most frequently met prefix and stem elements. They were also required to learn their variant forms and meanings. Students reported almost universally noticing a vast increase in word recognition during their routine reading.

This work was concurrent with outside class assignments in Lewis' "Word Power Made Easy" (14). It was also suggested that "The Automatic Vocabulary Builder" (15) be kept in the student's pocket and a page a day completed at odd times. This assignment outlasted the duration of the course since the book contains 150 pages.

At the end of three weeks a comprehensive vocabulary test was given and those who were low were given reassignments and asked to continue work in "Reading and Vocabulary Development" (16).

At the beginning of the sixth week exercises were started in comprehension and concentration. A lecture was given on the art of concentration through mental control of the sense organs, and one on associative memory.

The students were asked to select a book from our shelves or bring one of their own to class and portions of sessions were used to practice the following exercises:

1. **Psychological Conditioning.** When you sit down to read or study spend about thirty seconds to five minutes — whatever time it takes — to ask yourself and answer such questions as these before starting to read:

   Why am I doing this?
   For whom am I doing this?
   What good will it do me?
   Should I do it now?

   The purpose of this meditation is to relax tensions of the body and build attitudes that are conducive to success in reading or study. If you are unwilling, disinterested, too tired physically, or have no personal purpose for reading or study it might be better to wait until another time. If you grit your teeth, so to speak, and say, "I'll read this or else", you have taken the first step toward failure to comprehend and retain. Wait until you feel good about the task, can muster interest and willingness to proceed.

2. **Concentration.** You are able to concentrate only when you have met the above conditions. You concentrate

by control of your sense organs. Literally shut off outside distractions, sights, noises, odors, etc. by use of nerve control. Just do not let the message of distracting noises get to the brain. You must practice in order to accomplish this power of concentration. You must acquire the ability to concentrate if there is to be comprehension.

3. **Comprehension through concentration.** Begin with psychological conditioning, use concentration as mentioned in No. 2 above, and begin reading. Just as soon as you are aware that your operation is entirely mechanical and that you do not know what you are reading — STOP READING! Look away for a few seconds, dispose of the distracting thought, repeat psychological conditioning, and begin, not where you stopped, but at the beginning of the paragraph in which your mind began to wander. If this is not far enough back to pick up the sequence of thoughts, go back far enough to pick it up. Read with concentration and thus comprehension until your mind again begins to wander. Stop and repeat the procedure. Do this as often as necessary. NEVER READ WITHOUT CONCENTRATION AND COMPREHENSION AGAIN. At first this will be very frustrating, but if you persist you will soon develop the power of concentration.
4. **Listing distractions.** While you are reading as outlined in No. 3 above, take time to jot down the distracting thought each time your mind wanders. Number these items. Note the number of items per thirty minutes of reading or study. Note the importance of each item. You will probably find very few of them are important enough to pay any attention to, or are worthy of your thought at the time you are reading. If a majority of them are important, it is probable that you should not read or study at this time, but take action on the things that must be more important since they claim attention even when you desire to think about something else. Do this at least once a week while learning to improve your reading and study habits. The number of items should diminish with each passing week.

Beginning concurrently with the comprehension exercises on Tuesdays and Fridays of each week, students took a speed and comprehension test in SRA's "Better Reading Books" (17) and completed the Rate and Comprehension Graphs in the accompanying Reading Progress folder.

Also concurrently on Mondays and Thursdays each student was required to complete an exercise in "A Manual of Reading Exercises for College Freshmen" (18). This was primarily for developing phrase reading, rhythm of eye fixations, recognition of relative importance of words, and recognition of natural phrases.

During this same time the tachistoscope was used with the overhead projection and Keystone Tachistoslides (19). Initially, digits were used beginning with one digit at 1/100 of a second exposure and continuing until nine digits could be recognized at the same exposure time. Then phrase and sentence reading was used. As soon as a perceptual span averaging 3.5 words at 1/100 of a second fixation was developed, this work was discontinued. The daily tachistoscope sessions were of about ten minute duration.

If and when it was considered appropriate, based on each student's individual progress, the "Iowa High School Reading Training Films" (20) with comprehension tests were used. Students who used these were carefully screened as to rate, comprehension, perceptual span, and duration of fixation. None was allowed to view them unless proficiency in all these areas had been attained. Films were selected for each student according to his rate, each selection causing him to increase slightly. The main purpose was to develop rhythm of fixation. Unless comprehension was 90% or better on the test given after each viewing, students were not allowed to continue the series. Resumption was then based on comprehension and student's choice.

Various reading pacers were used, both to increase and decrease rate. For those whose rate was initially high without adequate comprehension or became so during training settings, they were used to decrease rate. Careful check was maintained on a twice weekly rate and comprehension test. If comprehension began to drop, use was discontinued. The student could resume, other things being equal, when three successive tests revealed 90% comprehension or better.

This procedure continued until the end of the fourteenth week. At this time students were given instruction in flexibility of speed and study techniques. Several "How to Study" tests were used. Students were encouraged, now, to bring their regular college texts to class for use in practice.

The key to success seemed to be careful supervision to assure that each student did not use any gadgets or exercises until he was ready, and to see that they were discontinued when they had served their purpose.

During this last week of the course, a complete diagnosis was administered, using equivalent forms of the same tests as were used for the original diagnosis. The following table gives median scores at the beginning and corresponding scores at the end of the course for the 98 students completing it during the three semesters.

Test	**Pre-test**	**Post-test**
Iowa Silent Reading		
Grade percentile	16	37
Comprehension percentile	45	96
Michigan Vocabulary		
Total score percentile	2	31
Opthalmograph		
Average duration fixation	.22 sec.	.12 sec.
Average span of recognition	1.16 words	2.38 words
Spelling		
Grade equivalent	8.5	11.1
SRA		
Rate	212	570
Comprehension	65%	90%

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1. The author instituted this program at Northeastern State College, Tahlequah, Oklahoma. Date quoted in the text are from the records there. The author is now engaged in starting a similar program at Central State College, Edmond, Oklahoma.

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THE CORNELL UNIVERSITY READING IMPROVEMENT PROGRAM

Walter J. Pauk, Director

Good reading depends not on the speed with which the eye travels across the printed page; rather on how accurately the mind interprets the printed symbol, how efficiently it can distinguish subtle shades of meaning, and how dexterously it can evaluate the complex concepts. It was upon these foundation blocks that the Cornell Reading Improvement Program was built.

The reading program was started in 1949 by Dr. Marvin D. Glock, who came to Cornell to teach Educational Psychology in the School of Education. Dr. Glock, who had done considerable work in reading at the University of Iowa, learned that a number of students taking his course in psychology were deeply interested in learning how to read efficiently. Dr. Glock's offer to teach reading was quickly accepted by his students. This group met voluntarily after school hours for a semester.

It was not long before the value of this course became apparent to the student body at Cornell. This experimental program was brought to the attention of the Independent Student Council which sent one of its members to take this informal course for the purpose of evaluating it. The Council immediately endorsed the course and urged university officials to make it available to all students.

So, in September, 1950, the course was offered, and over 1000 students signed to take it. Dr. Glock and one graduate assistant taught 350 students that first year. In spite of inadequate facilities and equipment, the popularity of the course increased, and the following year an additional graduate student was assigned to assist Dr. Glock with the reading program. Dr. Glock was appointed Director of the Reading Improvement Program in addition to his regular duties.

The reading program continued to grow so rapidly that in 1954 Dr. Glock recommended the appointment of a full-time director. The University acted on this recommendation and appointed Dr. Walter J. Pauk to this position.

Structure of the Cornell Reading Improvement Program

The reading program is a non-credit course and enrollment is voluntary. The fall programs are reserved for the freshmen; however, the spring programs are open to all undergraduates, graduate students, and faculty at Cornell. Each fall the incoming freshmen are given a battery of tests during Orientation Week. (Included in this battery are several tests which are used by the director of the Reading Program for the purpose of selecting those students who are eligible to take the reading course). When the students are thus assembled for testing, a brief description of the reading course is given by the reading program personnel. After this talk, the students are asked to state, in writing, whether they want to take the course. After noting the desires of the students, these statements are turned over to the responsible faculty advisers. (Cornell operates on a faculty adviser system; i.e., each individual is assigned a faculty member who takes on the responsibility for guiding and advising such assigned students).

For the fall reading program, only those freshmen are considered whose scores on the Speed of Comprehension section of the Cooperative Reading Comprehension Test fall in the lowest 30 per cent of the scores for their school or college. However, final selection of these students, who are in the bottom 30 per cent, is made on the basis of a formula which takes into consideration the scores of the Scholastic Aptitude Test, (1) scores on the Ohio State University Psychological Test, (2) and scores on the Vocabulary and Speed of Comprehension sections of the Cooperative English Test, C2: Reading Comprehension (Higher Level). (3)

The names of the students in the bottom 30 per cent (those eligible for the reading program) are made known to the advisers, who talk over the situation with the student. Students in the bottom 30 per cent, who did not make a written request for the course, are permitted to enter the course, if they so desire, after consulting with their advisers.

The spring program is made up of students from the undergraduate and graduate schools and colleges. This group is comprised of students who have experienced difficulty with their college work during the first semester and have come directly to the reading laboratory for help; and students referred by faculty advisers, counselors, and other university officials.

Following several years of experimentation with class size, it was found that the optimum results were obtained when sections were limited to about sixteen students. These sections meet for two fifty minute periods a week for nine weeks. The balance of the semester is allotted to the holding of conferences with the individual students who feel that they need further work on some of the aspects of reading introduced during the class periods.

Each student is also required to attend two half-hour sessions each week in the Reading Laboratory where he may practice reading various magazines, journals, textbooks, and novels with the aid of a reading accelerator. Furthermore, he may use textbooks and reference materials to practice certain study techniques and principles demonstrated in class.

The Philosophy of the Cornell Reading Program

The central problem of teaching students how to read and study more efficiently is not how the instructor can "give" understanding and comprehension to the student; rather how to provide a practice situation in which the student can gain an insight into the principles of comprehension which will be useful to him as a basis for formulating his own method or system for gaining meaning from the printed page. It is the gaining of insight which seems to make the difference. Insight comes when the student is given the opportunity to understand that which he is, at the moment, attempting to learn. The probability that such learning will occur is heightened when the students work to solve questions on carefully prepared practice exercises. The concept of putting into practice that which has just been said or demonstrated is aptly expressed by William James:

> An impression which simply flows in at the pupil's eyes or ears, and in no way modifies his active life, is an impression gone to waste. It is physiologically incomplete . . . Its motor consequences are what clinch it. (4)

Hence, in the Cornell Reading Program emphasis is placed on immediate follow-up of a lecture or demonstration with a practice exercise which gives the student the opportunity to better understand a specific technique or principle by **practicing under supervision.**

This process of understanding is further aided by the lively discussions which take place in the reading classroom. It has been our experience that there are definite advantages inherent in a group situation which are lacking in a private, tutorial situation. The dynamic element of discussion, interpretation, introspection, and explanation are conductive to a type of learning which is more readily transferred into the daily lives of the students. Furthermore, the students soon recognize that their problems are **not** unique, but are possessed by many of the individuals comprising the group. This is not to say that individual instruction is not the practice of the Cornell Reading Program. It is our contention that individual instruction is far more meaningful, efficient, and effective when it is done after the student has had the reading course. He is then able to identify his areas of weakness and understand some of the reasons for these weaknesses. Furthermore, he has learned concepts, techniques, principles, and a common language which make this individual instruction, at the end of the nine weeks, highly effective.

Teaching Design of the Cornell Reading Program

The course begins about two weeks after the test battery has been administered. This delay in starting provides the time to discuss individual reading problems and test results with the students selected for the reading program. Thus, a practical starting point is achieved by the student and instructor.

During the first week of instruction, students are given a vision test on the Orthorater (American Optical Company). Students who deviate from the normal are referred to the University Clinic for further examination.

The instruction of the Cornell program is based on the broad principles recommended by the National Committee on Reading:

1. adjusting reading to achieve the reader's purpose
    a. define purpose for reading
    b. select suitable approach for purpose and nature of material
    c. adjust speed to purpose and nature of material
2. grasping literal meanings of reading passage
3. getting broader meanings
    a. defining type of article
    b. recognizing tone and intent of selection
    c. understanding of organization of article
    d. perceiving implied or suggested meanings
4. synthesis and evaluation
5. integrating the meanings thus obtained with one's previous knowledge and experience. (5)

It is the practice to give the students a comprehensive overview of the course, covering the above principles, at the first session. The next several sessions are devoted to the identification of some of the common poor reading habits: vocalization, regression, etc. The students are then shown why these are poor habits, and finally shown how to get rid of such habits; thus, the negative habits are exposed for elimination before the positive ones are presented.

It is important to point out that the reading program places special emphasis on the development of the student's functional vocabulary. Without an adequate vocabulary, the student's ability to comprehend what he reads is seriously handicapped. To meet this need, an unique method (6) for teaching vocabulary was developed at Cornell. In a controlled study, it was found to be highly successful.

Most of the exercises used in class for practice are taken from the reading manual (7) developed by Dr. Marvin D. Glock. This manual contains lectures on the principles of good reading, a wide variety of interesting reading selections, and sets of provocative questions which challenge student understanding and application of reading principles. Some of the selections in this manual are assigned as outside reading. Such assignments generally take about twenty minutes to complete and invariably form the bases for class discussions.

Some mechanical devices are used in the reading program. The reading accelerators are used to aid the student in eliminating some of the poor reading habits such as re-

ressions and word-by-word reading, and to practice the techniques and principles of good reading as set forth in the classroom instruction. Speeded reading films (8) are shown every other class meeting. Films are alternated with rapid reading exercises which are timed. The tachistoscope slides are shown for approximately five minutes during four sessions which are interspersed over the course. Finally, devices and materials developed by the present director are used to demonstrate certain reading techniques.

At the end of nine weeks, the students are tested on an alternate form of the Cooperative Reading Test. This test is used as a source of information of a diagnostic nature. The personnel of the reading program go over each item of every test to find some pattern which might indicate a weakness in reading. For example, some students consistently miss questions dealing with inferences. In the area of vocabulary, some students miss words appearing most frequently in Elizabethean poetry. These weaknesses are discussed with the individual students who are assigned specific books and selections to read which are later discussed with the instructor. This system of identifying specific areas of reading weaknesses; providing practice material to correct these deficiencies; and explaining how to overcome these problems in daily reading assignments is a powerful motivational device which frequently provides the momentum for the transfer of classroom learning to actual situations beyond the classroom.

The reading program, we believe, has a greater obligation than putting students through a course in reading. The far-reaching obligation is to foster positive attitudes towards reading which will carry over into adult life, especially at this time, when this nation needs citizens who can and will read critically, evaluate arguments, and act on the momentous issues of the day. We are seriously close to a condition described by William James:

> . . . It would be a pity if any future historian were to have to write words like these: "By the middle of the twentieth century the higher institutions of learning had lost all Influence over public opinion in the United States. But the mission of raising the tone of democracy, which they had proved themselves so lamentably unfitted to exert, was assumed with rare enthusiasm and prosecuted with extraordinary skill and success by a new educational power; and for the clarification of their human sym-

> pathies and elevation of their human preferences, the people at large acquired the habit of restoring exclusively to the guidance of certain private literary adventures, commonly designated in the market by the affectionate name of ten-cent magazines" (9)

We believe that the challenge put forth by Tenney and Wardle has pertinence to all college reading programs:

> . . . If our system of education does not so train the minds of its students, if it does not teach them to recognize differences, to distinguish shades of meaning, to feel as by intuition not only the hypocrisy of the demagogue and the flattery of the bootlicker but also the depth of a statesman like Lincoln and the insight of a poet like Shakespeare, it fails of its purpose. (10)

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READING INSTRUCTION AT PURDUE UNIVERSITY

Russell Cosper, V. L. Lokke and George Schick

Like most English Departments, our staff had long been aware of the importance of reading proficiency for college work, and we had the chance in 1950 to work intensively on the problem. During the summer session of that year, eight of us met in a kind of seminar for eight weeks all day long. At the start we had guidance in many aspects of learning to read from our own Department of Psychology, and we were fortunate enough to be able to consult with people from Ohio State University, the University of Chicago, Illinois Institute of Technology, and the State University of Iowa. Then through the welcome cooperation of the Air Force, we spent three days at the Maxwell Air Base in Alabama where a machine-centered course was in operation.

After this preliminary look at other points of view, the seminar settled down to organizing a program. **With our own needs in mind, we decided on these constituents:**

1. Only basic reading skills would be taught in our beginning course — no writing, no literature, only incidental attention to study skills.
2. A laboratory would be constructed and all diagnosing, testing, and practicing would be done in the laboratory.
3. Reading instruction would be entirely voluntary and non-credit, at least in the beginning.

Accordingly we opened in September with a pilot program of about 250 students and one laboratory. For equipment we had the following:

Twenty-four booths around the outer walls, table height, about 30" x 30", with sidewalls to provide a measure of privacy.
A set of the Harvard reading films.
A large group tachistoscope and four individual short-focus tachistoscopes, each with slides.
A projector and screen.
A set of the Harvard essay books and tests.
Twenty-four accelerators.
About 200 books calibrated and leveled by a simplified combination of the Dale-Chall formula and the Flesch formula.

A supply of magazines ranging from **Coronet** to **The New Republic.**

Since the pilot program of 1950-51, enrollment has increased to 1150 each semester, housed in three laboratories. The booth arrangement is much the same, but other changes have been made. The staff no longer depends on tachistoscopic drill except for an occasional student noticeably weak in perception. We still have the original accelerators — often repaired — and we also use shadowscopes. The Harvard films and essays have been replaced by the **Purdue Reading Films** and **Toward Better Reading Skill.** While we still level books, the classification numbers (from 5 to 20) serve now more as an indexing device rather than as a guide. We allow 2/3 of an hour credit, just enough to give us an administrative handle for registration; and the course is a degree requirement in our School of Science, Education, and Humanities. Other schools still follow the elective plan.

English 185, **Developmental Reading,** meets for two one-hour sessions each week for one semester. With forty-eight divisions and twenty-five instructors, a certain uniformity of instruction seems inevitable. Three different activities are common to all classes: sixteen reading films and check tests, normally one film a week; a minimum of sixteen essays and check tests; practice with a pacer each laboratory session. These common drills leave ample time for other things, and each instructor varies the program to suit his convenience. Individual counseling, workbook exercises, vocabulary — each class is somewhat different in its instruction.

Two characteristics of the instruction are basic: group discussion is held to a minimum; and each student is an individual. The sessions are devoted almost exclusively to reading and to brief, quiet, individual conferences. Each student is made aware that he alone is responsible for his progress, he keeps his own records, he is never in competition with any one else or with a standard. To help carry out the theme of individual responsibility for progress, grades are almost automatic. If a student attends regularly and shows some progress, he receives a B. He may get an A through extra work, or he may even fail through absence or inattention. Needless to say, nearly everyone gets an A or B.

Testing

A program of pre — and post-testing serves as a measure of progress.

We have always insisted that the testing is an evaluation only of the total instruction; it is never used to evaluate an individual class or an instructor.

We have used four different tests: the Diagnostic Reading Tests, Survey Section; the Iowa Silent Reading Test; the Harvard Tests; and the four essay tests in **Toward Better Reading Skill**

The Diagnostic Reading Tests, Survey Section, yields five scores:

1-a — Speed of reading in words per minute
1-b — Recall of details on a scale of 100
2 — Vocabulary on a scale of 60
3 — Timed plus untimed comprehension on a scale of 40
4 — Total comprehension on a scale of 100

We used this test for four years, from 1950 until 1954. As an example, the results for the spring semester, 1952, were as follows:

	1-a	1-b	2	3	4
Beginning	274.27	76.92	43.52	30.05	73.57
Final	436.69	78.45	49.74	30.05	79.80
Gains	162.42	1.54	6.22	0.00	6.22

We stopped using this test because we felt that results were about the same each semester, and the reading selections were too easy for college students. It was not telling us enough about proficiency in the kind of reading we were teaching.

We used the Harvard test, which gives only speed and comprehension, for three years from 1950 to 1953. In the spring of 1953 our results were as follows:

	Speed	Comprehension
Beginning	211.81	59.13
Final	392.44	64.21
Gains	180.63	5.09

In 1952 we gave the Iowa test to about a third of our classes selected at random. From this test, we were able to manage six parts in a laboratory period:

1 R — Rate based on amount read in two minutes
1 C — Comprehension of the timed reading
2 — Directed reading
4 — Word meaning
5 — Sentence meaning
6 — Paragraph meaning

The scores are expressed in percentiles:

Score	Beginning	Final	Gains
1 R	66.20	91.12	24.92
1 C	57.49	67.83	10.34
2	50.27	68.39	18.12
4	57.28	69.99	12.71
5	48.86	66.10	17.24
6	66.72	79.10	12.38

These three tests are still used by individual teachers, but since the fall of 1953, our own essay tests have been the only program-wide evaluation. For the Spring Semester, 1956, the results were as follows:

	Beginning Averages	Final Averages	Gains
Speed (in wpm)	254.9	574.4	319.5
Comprehension	59.9	69.0	9.1

In addition we have used a student questionnaire to measure reactions — which are always extremely favorable. Graduating seniors, on the Dean's annual questionnaire, have rated English 185 first among the courses that ought to be required of all students. Still another means of evaluation has been the oculograph, which records eye-span, rhythm, and regressions. (See bibliography.)

Staff

English 185 is taught entirely by regular members of the Department of English. In equating teaching load, four hours in the reading laboratory are considered the equivalent of three hours in an academic class. None of us are reading specialists in the psychological or educationist sense, and would not care to be so considered. We teach reading skills as a normal part of English instruction, but we have of course leaned heavily on findings of psychologists in many aspects of our program.

Our feeling is that much of reading instruction is properly part of English — developing taste and judgement, increasing maturity, encouraging critical evaluation. To these familiar objectives we have simply added what seems useful from other disciplines. For students with special difficulties, those that seem true remedial cases, we are happy to be able to call on our Department of Psychology for clinical help.

Public Relations

Fortunately our relations with the administration and with the various Schools in the University have always been very good. In matters of budget and staff we have always had the utmost in cooperation. In fact the initial impetus to teach reading intensively came from our President. There has always been some pressure to increase facilities and enrollment, and we have added classes and staff each year.

We have in the past offered evening classes for faculty members with good results. Since we are however chronically short of instructors, we no longer can give this service. In any one semester, as a partial substitute, a dozen or so faculty attended the regular sessions with freshmen.

On several occasions we have given classes for industrial and business groups, most of whom have become enthusiastic supporters for reading instruction. Many of our staff appear before club and professional groups to discuss reading; and counseling with high schools, industries, and other colleges has been a regular and welcome part of our duties. At the present one staff member is given released time (not enough of course) to work with groups off campus.

Related Activities

Beyond normal instruction and public relations connected with our mass program, we carry on a number of related activities. Research, both theoretical and practical, is under the supervision of an inter-departmental committee committee of the Graduate School. Candidates for advanced degrees who write a thesis connected with reading come in a rather vague way under this committee: the thesis advisers usually include one member of the research committee. Beyond this academic provision the interdepartmental committee sponsors and directs a continuing program of research carried on by staff members and graduate assistants. Most of the results are reported informally via mimeograph to our own campus. Some of these projects have been published and one or two are listed in the bibliography.

We have a graduate course for master's candidates, English 687, Developmental Reading for Teachers, which is taken by our departmental majors. Since this course has proved popular for high school teachers, it has been given several times in the summer as a workshop. We also offer a year's course in reading for graduate students, called simply **Reading Improvement**. In addition to reading as a skill, the instruction includes intensive study of landmarks in the various areas of specialization, e.g., James and Rousseau for education students. Enrollment in this course has been small.

Undergraduate students may take two other courses in reading improvement in addition to the beginning skills course. Descriptions of these offerings have been kindly provided by the respective chairmen.

A Look Ahead

Plans are now underway to construct a fourth reading laboratory to allow for increasing enrollments. With more facilities we should be able to enroll 1500 to 1600 students. By one of those unlooked-for bits of luck, the Department of English is to move into a new building in the foreseable future. When this happy event occurs, we shall have four laboratories each seating thirty students. With this accommodation we should be able to service a majority of our freshmen.

Our reading instruction is offered solely as a service. We do not imply that our students have been poorly prepared; we simply have an obligation to help them succeed as educated adults. Improving reading proficiency seems to us a good way to better education.

Reading for Comprehension

Reading for Comprehension (English 285) is a one credit elective course designed to help those who are interested in learning to read closely and critically. As an elementary course in analytical reading, its purposes are to help the student achieve reasonable proficiency in finding key ideas, to help him recognize patterns of sound and faulty logic, to identify techniques of mass persuasion, and to increase his awareness of concealed assumptions and suppressed content.

The source materials used in English 285 include an elementary text in logic, Beardsley's **Thinking Straight**, issues of current magazines of opinion, **The Atlantic** or **Harper's**, and selected issues of newspapers of differing editorial policies. From the textbook in logical analysis the student learns how to identify an argument, diagram its structure, and weigh its validity. Other exercises are designed to help the student understand the operation of figurative language, recognize the techniques of oversimplification and distraction, and distinguish between sound and faulty definitions.

English 285 meets two hours each week and requires approximately two hours of outside work per week. No stress is placed on competitive grading, but two tests are given at the beginning and at the end of the course. The first, a shortened form of the Iowa Silent Reading Test, is used to determine minimum proficiency levels. The second test is used to evaluate the more complex aspects of reading ability. Several tests which presume to measure ability to organize, interpret, and evaluate have been tried, but the most satisfactory tests for our purposes have been those designed by Clarence Derrick in his University of Chicago Ph. D. dissertation, "Three Aspects of Reading Comprehension As Measured by Tests of Different Lengths." During the four years in which the course has been offered, all sections have shown strong gains on every test that has been used. Because of the amount of individual attention which is required, the classes were initially limited to fifteen, but with the pressures of increasing enrollments classes have averaged twenty per section for the past two years.

Growth In Vocabulary

Our experience with hundreds of undergraduate students in the regular developmental reading program, as well as with those in conventional composition classes, has brought the realization that a brief but intensive course devoted primarily to growth of vocabulary can be useful not merely to those students of a relatively low academic standing but to nearly all college students whatever their degree of intellectual maturity. As a consequence, English 286: "Growth in Vocabulary" has been instituted for students other than those specializing in English who have successfully completed the standard freshman composition course.

The objectives of this course are twofold: First, its purpose is to enlarge the vocabulary of students during the period of instruction. And second, the aim is to foster attitudes of mind and of interest which will continue the growth of vocabulary for an indefinite period. Of course every teacher of composition and reading realizes the significance of an increase in the vocabulary of his students, but, try as he will, there is seldom time enough for him to do what he would consider an adequate job in this area. Hence we have concluded that an intensive approach to the problem is justifiable.

In scope and content, English 286 is a one-semester, one-hour elective course, which meets twice a week, with outside preparation limited to an hour's work. Materials of the course, in addition to a good dictionary, consists of the following: M. M. Mathews' **Words: How to use them** (Holt, 1956), which provides brief discussions on the historical development of English dictionaries and their use, backgrounds and origin of English, prefixes and suffixes, Greek and Latin elements in the language, pronounciation and spelling; and a manual, Richard D. Mallery's **Workbook for English Vocabulary Building** (Heath, 1948), which offers a wide variety of exercise material on the full use of the several features of a good dictionary, roots and affixes (Latin, Greek, and native), discrimination in word usage, changes in meaning and form, and practice in the employment of contextual clues for vocabulary growth. In addition, the instructor presents further material on the history and development of English, etymology, borrowings from French, Spanish, etc., and occasionally assigns outside readings on similar topics. For emphasis on the importance of general reading, students read and discuss the articles in a particular issue of several periodicals and newspapers and develop awareness of the enlargement of vocabulary by this means. Portions of class hours are also frequently utilized for supervised study.

While it is scarcely to be expected that phenomenal gains in the individual student's vocabulary will be achieved after 32 hours of class instruction and practice, the objective tests given during the first and final hours of the course furnish concrete evidence of gratifying increase in word power and suggest that healthy growth in command of words may well continue in the future.

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THE READING IMPROVEMENT PROGRAM AT THE UNIVERSITY OF TEXAS

Elsie J. Dotson

History

The Reading Improvement Program as it is now offered at the University of Texas was initiated in September of 1952. For several years prior to this time no program approach to reading improvement was utilized. A student seeking assistance with his reading and study habits usually went to the Testing and Guidance Bureau, a psychological services center, and discussed his particular concerns with a counselor. Together, in one or several interviews, they discussed and worked on these problems. As the number of students requesting assistance in remedial reading increased it became evident that this method was too expensive from the viewpoint of counseling time. It was also felt that the services offered the student could be more adequate if one or more counselors would allot a definite portion of their time to the study and development of a reading improvement program; hence the program was begun.

Goals

The Reading Improvement Program is an adjunct of the Counseling Division of the Testing and Guidance Bureau. As such the primary emphasis is on the reader as a person; importance is given not only to how the individual reads, but how he feels about the way he reads, the personal meanings lying behind the particular way he reads, and what improving his reading means to him.

This type of concern prompts us to offer a program that is designated to facilitate growth in the student's conception and experience of himself as a reader, growth in his conception of reading, and the acquisition and increased facility in reading skills. Primarily the Reading Improvement Program attempts to offer a set of opportunities to the student who wishes to avail himself of any one or several of them. They are as follows:

1. A set of experiences that could result in the individual having a greater feeling of adequacy with which to approach his reading.
2. A set of experiences that could allow the individual to experience reading as a means of greatly enriching his life through a better understanding of himself and his world.
3. A set of experiences that could result in the individual regarding most reading as a pleasurable experience.
4. A set of experiences that could result in the acquisition of new and/or improved reading and study skills.

It is readily recognizable that these opportunities are not mutually exclusive. These four sets of experiences are not listed in absolute order of importance from our particular reference frame; however, the directional tendency is correct, and were this order inverted the program would be a vastly different one.

Student Population

The Testing and Guidance Bureau is a student service center, like the Health Center, and is not directly affiliated with any of the academic departments. This means that we offer no courses for credit, give no grades and require no students to utilize our services. Therefore the students who come to the Reading Improvement Program do so on their own initiative and are participating in the program for certain sought for changes in their behavior.

This means any student who feels a need to improve his reading may come to our program. Consequently we get the gamut, Freshmen through Graduate students, and students who may need basic remedial instruction through students who score at the ninty-ninth percentile on reading achievement tests. About the only thing some of these students have in common is their desire to read better.

This past fall three hundred and sixty-seven students attended the opening meetings for our fall program. Two hundred and seventy-six of these were men students and ninety-one were women students; seventy-five percent of those present were men students. When broken down into academic classifications the group distributed itself in this way: 35% of the total group were freshmen, 17% of the group were sophomores, 20% of the group were juniors, 15% of the group were seniors, 12% of the group were graduate students and 1% of the group were classified as special students and University faculty. When analyzed according to the college in which they were enrolled the group distributed itself in this way: 39% of the group were enrolled in the College of Arts and Science, 22% were enrolled in the College of Business Administration, 13% in the Engineering College, 1% in the College if Architecture, 7% in the College of Education, 1% in the College of Pharmacy, 2% in the Fine Arts College, 2% in the Law College; 10% in the Graduate College and 3% who failed to say what college they were enrolled in.

Nature Of The Program

The goals, previously outlined, and the heterogenity of the group are the two major factors considered in determining the type of program which is offered. In order to best meet the several needs placed upon us by these two types of factors it was decided to utilize instruction and participation in a group setting as the principle method of working with students in the program. Some of the reasons behind this decision are as follows:

1. The support given to a student through seeing that others have a problem, or problems, similar to his own.
2. The opportunities given to a student to diagnose and understand his problems through observing and participating in the discussion about the reading problems of others.
3. The advantages to be gained by having advice and suggestions come from the students themselves.
4. The opportunities extended to the student to make a contribution to others through his own suggestions or from what he reads.
5. The saving in counselor time and effort by working with several students of similar needs rather than with one.

As a result of our empirical experience to date with students of varying degrees of reading skills we have found it best to limit the size of the group according to reading achievement level. Currently we are dividing our program up into three types of groups. The Survey Section of the Diagnostic Reading Test and the Cooperative English Test, Test C2, Reading Comprehension (Higher Level) are the two instruments which are used to classify the students into groups. The groups and the criteria for each group are as follows:

1. Group I is essentially a reading improvement program, emphasizing the acquisition of new reading skills, techniques for increasing vocabulary and increasing the rate at which they read. Students who are placed in this group usually obtain an average reading rate of 250 wpm or better on the DRT, get 75% correct or better on the total comprehension score of the DRT and generally receive across the board scores on the C-2 which place them in the upper third on national college Freshmen norms for that test. This is roughly what we hold to; it is obvious that many cases have to be considered individually, however, this isn't too difficult a task. With this group we use the Iowa Reading Films and Dorothy Wilcox Gilbert's manual **Power and Speed in Reading.** Approximately 61% or 224 of our Fall group qualified for this program. The maximum number of students we place in this type group is 50, and this Fall we had four sections of Group I.
2. Group II is a program encompassing activities that could be classified as remedial, developmental and improvement. Generally speaking, all participants in this group must be reading at an average rate of 225 wpm or better, get 50% or more correct on the total comprehension score of the DRT and the C-2 is used to screen out those students who fall in the lower fourth on national college Freshmen norms. It is rather obvious that this is a difficult group to isolate and a large number of cases have to be considered individually. It is our feeling that the most essential need of this group is one of improving their so-called comprehension and the acquisition of new skills with which to

approach their reading tasks. Minimal emphasis is given to increasing reading rate. In this group we work on reading for main ideas, discerning the author's outline, reading to draw conclusions, techniques of improving their vocabulary, how to use the dictionary, work attack skills, reading in the various content areas, adjusting reading rate to the task and ad infinitum. We have found George Spache and Paul Berg's book **The Art of Efficient Reading**, Horace Judson's book **The Techniques of Reading**, and James Stroud's and Robert Ammon's workbook **Improving Reading Ability** to be a few of the more appropriate books for this group. We have a library of about 15 or 20 copies of approximately 16 different workbooks and manuals for use in reading programs and we use most all of these before the program is over. Approximately 30%, or 110 of our Fall population fell into this type group. We like to restrict the enrollment of each group of this type to a maximum of 15.

3. Group III is composed of students who read at less than 225 wpm on the DRT, obtain no more than 50% correct on the total comprehension score of the DRT and usually fall in the lowest quartile for national college Freshmen on the C-2. Again we can't hold absolutely to these criteria, but these are the characteristics which we look for in selecting students for this type group. In this group we usually find we have to devote more time to such basic skills as phonetics, syllabification, phonics, dictionary usage, etc. In this group we stress the modified form a Fernald method of word acquisition, i.e., writing it, seeing it and saying it simultaneously. This is a good method to use in getting students to notice the various syllables in words, to practice saying words and learn how to read the phonetic symbols — in addition to the value of kinesthetic learning. Since the students in this group read so slowly we find it advantageous to use shorter selections such as are found in William Baker's book **Reading Skills**, Ruth Strang's book **Study Type of**

Reading Exercises, and Elizabeth Simpson's **SRA Better Reading Book.** The vocabulary level of these books is such that it doesn't act as a hinderance to the reading of these students. The tachistoscope is also used, principally as a means of demonstrating phrase perception and a means of motivating the students through demonstrating to them that they can "see and grasp" several words at one glance. A good deal of emphasis is placed on reading faster in this group since most of the students are "word-for-word readers" and many times this technique of reading acts as a double handicap in that it makes understanding and retention more difficult for the student. Approximately 9% of the Fall population were placed in this type group. Generally enrollment in this type group is restricted to 10 members per group.

A rather close watch is kept on the day to day performance of each person in the program, particularly during the first two weeks and any individual who feels, or whom we feel, is miscast with reference to the group in which he has been placed may be reassigned to another group. The student is allowed to change groups even if it is our opinion that he should remain where he is. Many times he is much happier and feels he is getting more of what he wants when he has made this change.

In Group I, the reading improvement program, the order of activities for each day is relatively rote and inflexible. The group sees one of the films in the Iowa series, answers the questions over the film; sees the film a second time and then does an exercise in the Gilbert manual. In reading the articles in the manual the procedure suggested by the author is followed, one minute is allowed for pre-reading or scanning, then the article is read, reading time noted, and the questions over the article are answered. After the student has corrected his answers, plotted his rate and comprehension he then either will turn to other exercises in the manual and do them, or listen to a brief lecture on some reading or study skill. About three or four times during the program the time after the reading of the article will be used to discuss questions and problems that the students in the group may pose; otherwise all such questions and problems are considered in individual contacts.

The order of procedure in Groups II and III is much more varied; in these groups considerable attention and effort is made to tailor the discussion topics and reading skills to the needs of the particular students in the groups. One section of Group II may work on reading to discern the author's outline for two weeks, while another section of Group II may do this type exercise only twice. The students enter very actively into the decision of what skills to consider and in determining how long they should work on these skills. Many times the whole period will be devoted to discussing a problem that one of the students has brought up. In these groups films on such topics as "How to Study," "Improving Your Spelling," "How to Use the Dictionary," "Speeding Your Reading," "How to Read Poetry," etc. are shown and discussed if it seems appropriate to the needs of the group. Each person in each of these two types of groups is seen at least once in an individual contact with the person in charge of his group.

Each of our groups meets three times a week, Monday, Wednesday and Friday, for 50 minute sessions. Group I, the Improvement Group, lasts 9 weeks, Groups II and III may last longer, depending on the groups themselves. This Fall two sections of the Group II at the end of 9 weeks time elected to go right on into the Improvement Program, or into Group I. This, then, will be a full semester's undertaking for them, 9 weeks as a Group II and 9 weeks as a Group I.

No homework, as such, is assigned in our program; rather the students are encouraged to utilize the reading skills and study habits discussed in the Reading Program in their day-to-day reading and studying activities.

Test Battery

Each student who enters the program takes four tests, two reading achievement tests, a scholastic aptitude test and one personality test. The test battery currently in use consists of the following tests: one form of the Survey Section of the Diagnostic Reading Test (from Grade 7 through College Freshman Year), one form of the Cooperative English Test, Test C-2; Reading Comprehension (Higher Level), one form of the Cooperative Inter-American Test of General Ability (Advanced Level), and the Edwards Personal Preference Schedule. If research projects necessitate other tests are included. We also have access to the Entrance Tests, English Classification Tests and the Texas Occupational Interest Analysizer taken by all freshmen.

The results of the tests which are taken upon entering the Reading Improvement Program and an explanation of the meaning of the scores and the purpose for giving the tests are made to the group. This is followed by a question and answer session and group discussion of the meaning of these tests. We have generally found that students are very interested in the results of these tests and try to make them as meaningful as possible in understanding themselves. Upon completion of the program each student takes an alternate form of the Survey Section of the Diagnostic Reading Tests as one means of helping him to evaluate his experience in the program.

Personnel

The staff of the Reading Improvement Program consists of one Clinical Psychologist who devotes two-thirds time to the administration of and participation in the program, one Psychologist who devotes two-thirds time to participation in the program and the assistance of some of the students who are serving their internships as Counseling-psychologists in the Testing and Guidance Bureau.

Doctoral students in the Counseling-Psychology Program may serve their internships in the Testing and Guidance Bureau. As part of their intern duties they may elect to work in the Reading Improvement Program. If they chose to do so, they observe the activities of one group for a semester, sit in on case conferences and pursue a program of study about reading improvement programs through reading suggested materials. The following semester the intern then undertakes the instruction of one group, working closely with the staff members of the program.

Allied Services

Within the structure of the Bureau itself there are four service departments that the Reading Improvement Program utilizes. All group and some individual test administration is done by the Psychometric Division, and the scoring of group tests is done by the Scoring Division. Assistance with the design of research projects and statistical work is done by the Division of Research and Statistics. All extensive counseling cases in the areas of vocational guidance, social and personal problems are referred to the Counseling Division.

The primary referral agencies outside the Bureau are the Student Health Center and the Speech and Hearing Clinic. All students who enter the Reading Improvement are urged to have their eyes and vision checked by the oculist at the Health Center, and occasionally we will suggest that a student see one of the other types of physicians at the Health Center for some possible physical problem.

All members of the Bureau Counseling Staff, including those working in the Reading Improvement Program meet once a week for a case conference, with one of the psychiatrists at the Health Center. Also a second case conference is held once a week by all the counseling staff of the Bureau.

Equipment

The Reading Improvement Program makes regular use of the Iowa Film Series in its Group I type programs. Occasional use is made of the Keystone Overhead Tachistoscope in the Group II and III programs. We also have on hand two SRA Reading Accelerators, one Tri-Dimension Reading Rate Controller and one Reading Rate-o-meter put out by the Audio Visual Research Company; these accelerators are used occasionally when a student seeks some method of helping himself increase his rate of reading and this seems to be the only need and concern of the student.

Workbooks and Manuals

A rather sizable library for use in the Reading Program has been built up; this was done by asking the different groups within the program to buy different workbooks and upon completion of the program the students were asked to give their workbook to the Program if they felt they had no further use for them. We have most of the workbooks listed below in quantities of 10 to 20 copies, thus giving quite a diversity of workbooks in which to let the student work. We have gauged the approximate difficulty level for the student, as a result of working with students and these manuals. A list of the manuals and the difficulty levels are as follows:

I. Difficult

Toward Better Reading Skills, Russell Cosper and E. G. Griffin, Appleton-Century Crofts.

A College Developmental Reading Manual, Wilking-Webster, Houghton Mifflin Co.

The Meaning in Reading, Wise Congleton Morris, Harcourt and Brace.

The Technics of Reading, Judson and Baldridge, Harcourt and Brace.

Better Reading in College, Dallman and Sheridan, Ronald Press.

Viewpoints: Reading for Analysis, Barnhart, Donnelly, Smith, Prentice Hall.

Selections for Improving Speed of Comprehension, Perry and Whitlock, Harvard University Press.

New Problems in Reading and Writing, Sams and McNeir, Prentice Hall.

II. Medium

An Approach to College Reading, Everett L. Jones, Henry Holt.

Study Type of Reading Exercises, Ruth Strange, Teacher College.

Reading Skills, William Baker, Prentice Hall.

Improving Your Reading, Frances Triggs, University of Minnesota.

College Reading Skills, C. M. McCullough, Ed Brothers, Ann Arbor, Mich.

Purposeful Reading in College, J. M. McCallister, Appleton-Century-Crofts.

Improving Reading Ability, Stroud and Ammons, Appleton-Century-Crofts.

The Art of Efficient Reading, James C. Brown, D. C. Heath and Company.

III. Easy

Getting the Meaning, No. 3, Guiler and Coleman, J. B. Lippincott.

Basic Reading Skills for High School, Gray, Horsman and Monroe, Scott Foresman and Company.

How to Become a Better Reader, Paul Witty, Science Research Associates.

How to Read Better and Faster, N. Lewis, Crowell Publishing Company.

Reading Manual and Workbook, Carter and McGinnis, Prentice Hall.

Helping High School Students Read Better, Elizabeth A. Simpson, Science Research Associates.

IV. Vocabulary

Words are Important, 5 Levels based on Word Frequency List, H. C. Hardwick, C. S. Hammond and Company.

Reading and Vocabulary Development, Christian Oliver Webb, Prentice Hall, Inc.

Outstanding Needs

The needs of any reading improvement program are so many and complex that the discussion of them is almost forbidding; it is almost like asking a person what 10 wishes would he make if the magic fairy would grant them.

In any change that we would make in our program would have to be underwritten through the employment of additional personnel. Qualified persons are needed to instruct in our groups and initiate new and assist in current research activities.

With additional personnel it is hoped that we can increase the number and nature of individual contacts with students. We would like to see more of our students in individual interviews, we would like to see some of them in more extensive counseling contacts; more of our students need individual instruction in reading than we are able to give to them and we certainly need to do more individual diagnostic work than we are doing.

A fourth immediate need of our program is that of evaluation. The program needs to be evaluated in terms of ascertaining what effects are brought about through participation in the program and what is the permanence of such effects.

Conclusion

The Reading Improvement Program, as we envision it, is one part of the total educational experience of the student who participates in it. It is educational in that it presents an opportunity for growth; growth in self concept, attitudes and skills. The Reading Improvement Program is not viewed as unique in what it has to offer; students may acquire the same growth in other situations, such as classroom experiences, contact with other students, in his own individual reading and study pursuits, and contacts with his professors. However, for some students a program such as the Reading Improvement Program offers the only environment in which this growth might take place. For others it is a means of enhancing the acquisition of skills and attitudes already in operation. For some students the reading improvement program is unnecessary and for others inappropriate.

A COLLEGE READING PROGRAM AND ACADEMIC PERFORMANCE

Arthur S. McDonald
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Reading is an extremely complex process. Spache has shown how the concept of reading has moved toward continually broader interpretations and has pointed out that remedial programs must similarly broaden their objectives(4).

The complexity of reading means that a successful reading improvement program will have many outcomes, equally complex in their nature and consequences. This increases the difficulty of adequately evaluating the effects of reading programs.

In spite of such difficulties research aimed at assessing the value and outcomes of college reading programs has been carried on almost from the beginning of such services.

We may not agree completely with Robinson's assertion:

> Academic performance is clearly the sine qua non for the validation of remedial (reading) courses, particularly in liberal arts curricula where by far the largest portion of scholastic agenda comprises reading or related activities. And in the final analysis, remedial instruction must necessarily stand or fall on the basis of this single criterion, however ingeniously alternate standards of comparison are defended (3).

We may disagree with Robinson's conclusion that remedial programs have not conclusively demonstrated their value. We realize very well that there are many valuable outcomes of college reading programs which may escape the broad meshes of the net formed by academic grade-point averages. We also realize how fallible grades sometimes are as measures of academic achievement. Nevertheless, even while pointing out the weakness of academic marks as a criterion of measurement, Burnham and Crawford observed that a student's academic life depends on his marks (2). Furthermore, many of us have had colleagues or administrative superiors raise the question (either implicitly or explicitly) concerning the relationship of our reading programs and student academic achievement. Many of our students operate on the assumption that completion of our programs will aid them in getting higher marks. So, there is room for studies concerned with academic performance as a criterion if such studies are suitably delimited and qualified.

While the situation in regard to the number and quality of studies concerned with evaluating the effect of college reading improvement programs on academic performance is considerably better than when Robinson wrote, yet Bliesmer pointed out in his summary of research last year that studies which used academic achievement as a criterion of effectiveness resulted in varying conclusions (1). He noted that the inconsistency of findings occurred whether groups were matched or unmatched.

This present study is reported to throw further light on the problem. It is an investigation of the academic performance for three semesters of students who completed a term of the Cornell Reading Improvement Program as compared to the performance of students in a control group. The study also compared the scholastic attrition of the two groups during this three semester period.

Selection of The Sample For Study

All students enrolled in four-year curricula of Cornell who completed the Reading Improvement Program during the fall semester of 1954 made up the experimental group, with the exception of:

1. two students for whom complete test data were lacking,
2. eight girls, chosen by selecting alternate cases, who were excluded to maintain the sex proportionality of the samples.

The experimental group numbered 116 students.

The control group was chosen from freshmen enrolled in four-year curricula of Cornell who had applied for admission to the Reading Program but who had not been enrolled because of limited facilities. Letters were sent to 210 of these freshmen who had submitted written applications for enrollment, inviting them to come to a special testing session at night in the early part of November, 1954. All who responded to this request were chosen for the control group, with the exception of:

1. ten students who subsequently enrolled in the spring semester classes of the Reading Program: (Efforts were made to dissuade these control students from such enrollment, without, of course, revealing the reason.)
2. students for whom complete test data were lacking:
3. students whose native language was not English.

Of the 160 students who took the special tests, 142 were placed in the control group.

The experimental and control groups were each divided into two subgroups. This division was necessary because two measures of scholastic aptitude are used at Cornell. These are the Scholastic Aptitude Test (S.A.T.) and the Ohio State University Psychological Test (O.S.U.). One or the other of these tests is used by the different divisions of the university as part of the admissions test battery.

S. A. T. scores were available for students from the Colleges of Engineering, Home Economics, and Arts and Sciences. These students were placed in one set of subgroups for the statistical computations. The numbers of students in these experimental and control subgroups were proportional with respect to sex and division of the university.

Students for whom O.S.U. scores were available were those from the College of Agriculture, School of Hotel Administration, and School of Industrial and Labor Relations. These composed the other set of subgroups. These subgroups likewise were proportional with respect to sex and college of the university. (Eight girls had been excluded from the experimental subgroup in order to achieve this proportionality. These girls were selected for exclusion by taking every alternate girl.)

These experimental and control groups are not considered as random samples either of college freshmen in general or of Cornell freshmen. (In point of fact, the subjects of the study were students of below-average academic ability as measured by Cornell standards. The experimental group was less capable academically, as measured by the tests used, than was the control group. Neither group, however, was characteristic of the freshman class which entered Cornell in 1954.)

The conclusions of this study, therefore, should not be constructed as necessarily applicable to other situations unless conditions of instruction are similar and the groups could reasonably be considered as samples of a population from which the subjects for this study constituted a random sample.

It is assumed that motivation of the two groups in this investigation was sufficiently controlled by the process used to select the control group. The level of motivation, in respect to participation in a reading improvement program, at least, of those students who, although their initial applications for enrollment had been rejected, voluntarily appeared for further testing, is believed to be approximately equivalent to the motivation of actual participants in the program. (The strength of this motivation is suggested by the fact that 64 per cent of the control group completed the Reading Program by the end of the spring term, 1956. Since another 19 per cent had left Cornell by the beginning of that spring term, only 17 per cent did not carry out their declared intention.)

The experimental and control groups were compared with respect to:

1. academic achievements as measured by college grade-point averages for each of three semesters and cumulatively for the three semester period.
2. tendency to make semester grade-point averages below 70.
3. tendency to remain enrolled in Cornell.

The performance of the experimental and control groups with respect to academic achievement was investigated by means of analysis of covariance. Control variables used to compensate for individual differences were scores on the S. A. T. or O. S. U., scores on the Cooperative Reading Test, and age (expressed in terms of months.) As previously noted, the groups were equated with respect to sex, and division of the university. Table I shows a comparison of the groups as regards the control variables used in the investigation.

The discriminant analysis technique was used to compare the groups with respect to the tendency of their members to make grade-point averages below 70 and the tendency of their members to remain enrolled in Cornell.

Findings

Comparison of the experimental and control groups in regard to academic achievement showed that the experimental groups significantly exceeded the control group in first semester grade-point average and in cumulative grade-point average for two and three semesters. Table II compares the groups with respect to academic performance for the three semester period.

Table I

A Comparison Of Experimental And Control Groups In Respect To Control Variables Used In The Study

Group A

	Experimental		Control	
Variable	Mean	Standard Deviation	Mean	Standard Deviation
Age	218.5	4.8	219.0	4.4
Coop Speed of Comprehension Score	53.4	5.2	61.5	5.3
Coop Vocabulary Score	57.2	5.8	59.0	5.5
S. A. T. Verbal Score	470.35	67.8	506.21	56.7
S. A. T. Math Score	543.04	85.1	567.49	86.5

Group B

	Experimental		Control	
Variable	Mean	Standard Deviation	Mean	Standard Deviation
Age	232.3	27.2	224.4	21.8
Coop Speed of Comprehension Score	54.0	4.5	59.5	6.2
Coop Vocabulary Score	56.4	5.5	58.8	6.8
O. S. U. Score	71.5	12.8	78.5	23.7

Table II

Comparison of Grade-Point Averages

Period	N	Exper. A	N	Control A	N	Exper. B	N	Control B
First Semester	51	77.2*	72	73.1*	65	75.0*	70	72.5*
Second Semester	50	76.8	70	75.6	64	74.9	65	73.9
Two Semester Cumulative	51	77.4*	72	73.8*	65	75.3*	70	72.5*
Third Semester	48	76.7	61	76.6	57	75.8	53	75.6
Three Semester Cumulative	51	76.9*	72	74.4*	65	75.4*	70	72.8*

* Grade-point average adjusted for individual differences as measured by control variables.

Table III

A Comparison Of Students In The Sample With Respect To Percentages Of Grade-Point Averages Below 70 For Three Semesters

Experimental — X Control — C

Semester	Group	Number of GPA Below 70	Per Cent of Group	Chi-Square Value	F Value
1	X	18	15.5	5.29*	11.09**
	C	39	27.4		
2	X	14	12.2	2.68	6.44*
	C	27	20.0		
3	X	18	17.0	0.07	0.40
	C	18	16.0		

* Significant at the 5 per cent level of confidence

** F-value obtained by discriminating equations significant at 1 per cent level of confidence.

The differences between the groups in grade-point average for the second and third semesters were not statistically significant. The difference between the groups, however, in regard to second semester grade-point average closely approached statistical significance.

Comparison of the experimental and control groups with respect to the tendency to make semester grade-point averages below 70 showed that students in the control group significantly exceeded students in the experimental group in the number of first and second semester grade-point averages below 70. Table III shows a comparison of the groups in this regard. No significant difference was found between the groups for the third semester. This change of trend may have been due to the increased selectivity of the control group.

Table IV

A Comparison Of Students In The Experimental And Control Groups With Respect To The Percentages Of Dropouts For Three Semesters Cumulatively

Experimental — X
Number of Cases — 116

Control — C
Number of Cases — 142

Semester	Group	Number of Dropouts	Per Cent of Dropouts	Chi-Square Value	F Value
	X	2	1.7		
1	C	7	4.9	*	
	X	9	7.7		
2	C	26	18.3	6.07**	12.71***
	X	10	8.6		
3	C	28	19.7	6.20**	11.44**

* Insufficient number of cases in each group for reliable chi-square

** Significant at the 5 per cent level of confidence

*** F-value obtained by discriminant equations significant 1 per cent level of confidence

Investigation of the numbers of dropouts in the experimental and control groups showed that significantly fewer students in the experimental group dropped out of Cornell during the period of the study than was the case for the control group. (See Table IV) Comparison of the dropout record of the experimental group with that of the remainder of the freshman class of 1954 (including the control group) showed that the statistically significant difference found between the experimental and control groups did **not** result from a sampling artifact — i.e., the control group did not have an abnormally high dropout rate in comparison with the rest of the class from which it was drawn. The investigation showed, rather, that the experimental group had a markedly lower dropout rate than the class from which it was drawn. This is notable in view of its less favored position relative to the measures of scholastic aptitude used. (At the end of three semesters, 8.6 per cent of the experimental group, 19.7 per cent of the control group had left Cornell as compared to 15.9 per cent of the freshman class as a whole) (excluding the two groups.)

Conclusions

The results of this investigation led to conclusions which suggest the influence of the Reading Improvement Program on the academic performance of Cornell students.

Insofar as the measures used controlled individual differences in academic ability and initial reading ability, and insofar as no other pertinent but uncontrolled influences related to academic achievement created an important bias, students who completed the Cornell Reading Program:

1. Significantly surpassed students in the control group with regard to cumulative grade-point average for all three semesters of the study.
2. Made significantly more grade-point averages above 70 than did students in the control group. Thus, the higher mean grade-point averages found for the experimental group were **not** achieved through the combination of many low grade-point averages with a few extremely high ones while most of the control group was achieving satisfactory grade-point averages with only a few of its members making low averages. On

the contrary, a significantly greater proportion of low grade-point averages were made by students in the control group and its mean grade-point average was achieved by means of a few extremely high grade-point averages.

3. Had significantly smaller proportion of dropouts for the entire period of the study than did either the control group or the remainder of the freshman class.

By the end of the third semester, 106 of the original 116 members of the experimental group survived (a staying power of 91.4 per cent), as compared to 114 of an original total of 142 for the control group (80.3 per cent). In view of the preceding findings, the conclusion seems justified that the greater staying power of the experimental group was not achieved at the expense of academic achievement as measured by grade-point average.

Despite the increasing selectivity of the control group, due to its greater dropout rate, and despite the continuing inferiority of the experimental group in academic aptitude, as indicated by the measures used, students who completed the Cornell Reading Program surpassed students in the control group in the three phases of academic performance investigated by this study.

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THE COMMUNICATIONS SKILLS PROGRAM AT SOUTHERN STATE COLLEGE:

AN APPROACH TOWARD EVALUATION

By Rudolph Fichler

Teachers of college English face a continuing problem in a wide diversity of student ability with respect to the basic communications skills of reading, writing, speaking, and listening. The problem is to some degree obviated if the college selects its students rigidly from among the higher-ranking graduates of the secondary schools, but even then students who are supposed to have reached a passable level of general competence may be found to be deficient in one aspect or other of the communicative process. Furthermore, just as the elementary schools in the course of time abandoned rigid standards for promotion from grade to grade and undertook instead to provide educational opportunity for all up to the level of ability, so the secondary schools also have undertaken to provide a comprehensive program adapted to individual needs of the pupils, and in a similar way the colleges, no longer limiting their services to a select intellectual few destined for the professions, have increased their range of offerings to serve students preparing for technological functions in an increasingly complex industrial economy.

Southern State College, like most tax-supported area colleges in the West and South, has with the tacit approval of the taxpayers developed a policy of accepting all serious-minded applicants for admission. Under such a policy, the interests and special abilities of the students tend to be exceedingly diverse, calling for many instructional expedients if individuals are to be given the kind of college program they want. In the area of the communications skills, several different methods for serving individual differences of students have been worked out. These have included:

1. Reading Laboratory, giving one semester hour of credit for three class hours a week, in operation since the fall of 1952.
2. Course in Principles of Composition, giving similar reduced credit, offered during three semesters from

February, 1954 to June, 1955.

3. Non-credit course in Basic Communications, made prerequisite to the usual freshman English course in the fall semester of 1955.
4. Two efforts toward ability grouping, in the fall of 1951 and in the fall of 1953.
5. Five-day-a-week freshman English program, offered in lieu of the usual three-hour-a-week course, required of certain beginning students in the fall of 1955.

Evaluation of results for the first three of these innovations is herewith attempted through a follow-up of students who have been enrolled in the various phases of the communications skills program.

The reading laboratory for 1952-53 enrolled 57 students. For 11 of these who are still enrolled in the fall semester of 1955 or who have been graduated the median number of credit hours completed in 124, for a median grade point average of 2.26. For 46 who withdrew from Southern State College the median number of hours completed was 28, for a median grade point average of 1.67.

The reading laboratory for 1953-54 enrolled 72 students. For 14 who are still enrolled or have been graduated the median number of hours completed is 81, for a median grade point average of 2.24. For 58 who withdrew, the medians are 27 for hours completed and 1.88 for grade point average.

The reading laboratory for 1954-55 enrolled 64 students. For one graduate and 37 others still enrolled the median number of hours completed is 29, with a grade point average of 1.94. For 26 who withdrew the medians are 21 for hours completed and 1.68 for grade point average.

The one-hour course in Principles of Composition during three semesters enrolled 71 students. The 21 still enrolled have a median of 28 hours completed for a grade point average of 2.00. The 50 who withdrew had a median of 23 hours completed with a grade point average of 1.71.

The non-credit course in Basic Communications enrolled 32 students. One year later, 17 students are still enrolled, with a median of 27 hours completed and a grade point average of 2.00; and 15 have withdrawn with a median of eight credit hours completed and a median grade point average of 1.09.

Altogether, 295 students were enrolled in the various phases of improvement service in the communications skills program. Of these, 100 have continued in college or have been graduated, and 195 have withdrawn. It should be noted that between the various programs, the relative differences for numbers of students who have continued in college are apparent rather than real. Mortality is likely to be high among the 37 students of the 1954-55 Reading Laboratory group who continued and are now sophomores, as their median grade point average is below the level accepted as satisfactory, and some of them at least will be discouraged from continuing beyond the second year of college because of low grades.

The only moral that occurs to me is that there is no future in reading improvement work if it becomes merely synonymous with **remedial** teaching, whatever that is.

SOME RECENT RESEARCH IN COLLEGE READING

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The present paper attempts to review research and pertinent other articles which were found in the literature during 1956 and in the latter months of 1955. While the majority of the sources relate directly to college reading, several refer to industrial settings and several are concerned with high school reading. The latter are included because of direct or possible pertinent applicability to college programs. Other references have been included because of interesting implications.

It should be kept in mind that, as stated on previous occasions from this platform, the results of investigations may be significantly influenced by, among other things, the subjects involved, the techniques and materials used, the conditions specific to the study, the tests employed, the statistical devices used, and perhaps the bias or misinterpretations of the investigator. Further, most studies report results in terms of group means which obscure variations among the individuals in the group. With this preliminary, the reviews will be presented with little or no editorial ocmment.

Typography

Tinker and Paterson (43) reported the results of nine experiments in which the effects of typographical variations on eye-movements were studied. It was found that such factors as line width, size of type, type face, type form, black as opposed to white print, and brightness contrast significantly influenced eye movements. Tinker (42) investigated the relation of speed of perception in reading varying type faces to the length of the reading period and found that "reading periods of ten minutes or more produced a significant retardation in reading italic in comparison with roman print" and that "Retardation in reading all-capital material in comparison with roman print was large and approximately the same irrespective of the length of the reading period within limits of four to sixteen minutes."

In another investigation Tinker (41) studied the speed and character of eye-movements in reading materials arranged in a vertical manner before and after six weeks of practice. Compared with horizontal reading, the vertical was slower but the practice resulted in marked improvement in speed. It was suggested that some combination of horizontal and vertical arrangement of reading materials would capitalize on the advantages of both.

Nahinsky (29), investigated the relationship between span of comprehension and typography, used tachistoscopic exposures of three different styles of typographic arrangement: conventional style; spaced-unit style — which leaves additional spaces between "natural phrases," and the square-span style — in which the second "natural phrase" appears immediately below the first. Square span yielded comprehension span scores significantly superior to each of the other two styles. There was no significant difference between scores on the conventional style and the spaced-unit style. He suggested that square-span style used in books and advertising might lead to increased reading and comprehension speed but cautions that this warrants further investigation.

(Note: The above mentioned investigation illustrates clearly that group means obscure many individual variations in that when the square-span style was compared with the conventional style, 20 subjects scored better on the squared style, 9 subjects scored better on the conventional style while 1 did equally well on both. When square-style was compared with spaced-unit style, 25 subjects did better on the square type while 5 subjects did better on the spaced-unit style.)

Foley (15) used a new set of digits designed to make maximum use of easily discriminated forms. When presented tachistoscopically, compared with a conventional set of digits, the new set was significantly more legible under all conditions of illumination and color combinations studied.

Readability and Understandability

The relationship of readability to understandability has been investigated. From her findings, Peterson (30) inferred that the Flesch Reading Ease scores do adequately estimate the comparative difficulty in comprehension of "popular" reading material for experimental group.

Lockman (22) however, points out that readability measures will not indicate whether ideas expressed are nonsense, ungrammatical, simple or complex, and describes a rating scale which purportedly could specify limits of intelligibility which cannot be determined from readability estimates. Supporting this point of view, perhaps, are the results of a study by Bernstein (2) who found that subjects reading two passages of equal readability where one was more interesting than the other, read the more interesting story with higher comprehension.

Major (24) investigated the readability of ten college General Biology textbooks and found that the range was from the lower quartile to the median of the difficult category of Flesch's formula. He concluded that the above average students would encounter difficulty with 32.8 per cent to 70.8 per cent of the reading assignments in the respective textbooks, and the average students 53.6 per cent to 84.7 per cent of the assignments. The investigator increased the readability of several passages by reducing sentence length and reduced syllable count. Significantly improved comprehension was achieved by the above average students when readability was increased by one grade level and by average students when readability was increased by at least two grade levels.

Factors Related to Reading

Kasdon (19) found the following characteristics were statistically significant in differentiating superior readers from a "normal" sample of college freshmen: (1) higher intelligence, (2) greater incidence of broken homes, (3) greater amount of participation in social activities, (4) college matriculation at a younger age, and (5) more efficient eye movements.

Strom (39) investigating how knowledge of grammar functions in reading concluded that, in general, there was little if any relationship between ability to read materials of an informative or literary nature and the ability to analyze the syntax and grammar of the sentences read.

Still (38) found that, within the high school population studied, there was a positive relationship between listening ability and high school grades. Further, "Correlations . . . indicate a trend for the relationship between listening ability and grades to be inversely related to intelligence and reading ability" but "further study is needed for confirmation or rejection of this trend."

Webb and Wallon (48) attempted to investigate whether a person could best comprehend a body of information by reading or by hearing. Results were that: (1) a single read-through of the material and hearing the material read once resulted in equally effective comprehension, (2) study reading of the material for a period of time equal to the length of time required for verbally presenting the material resulted in significantly greater comprehension when compared with single read-through or auditory presentation, (3) simultaneously reading and hearing the material was more effective than reading the material through once or hearing the material but not significantly different from the results of studying the materials.

Shropshire (34) studied the relationship between some properties of closure and reading performance and concluded that the ability to plan ahead ideationally, the ability to attain closure against distraction, and the ability to abstract an item from an ambiguous field were associated with speed and power of reading. Eames (12) suggested that some language disability might be the result of lesions affecting pathways between separate language centers in the brain.

Specific skills (?). Betts (3) reviewed three studies and concluded that comprehension skills may be specific to subject matter areas. Campbell (6) and Elkins (13) indicated that necessary reading skills may vary with particular fields of study.

Cooper (7) attempting to test the conviction that reading ability becomes differentiated into specific abilities requiring different skills, examined the role of general and specialized vocabularies in reading the materials of a general nature, of literature, social studies, and science. He found high intercorrelations between the four vocabularies, high intercorrelations between the four "reading abilities," and correlations between each of the four vocabularies and each of the four reading abilities ranged from .662 to .853. He concluded that reading ability appears to be largely an expression of the students' total intellectual and language development. The differences in the opinions expressed above may be the result of differences in definition as to what constitutes a specific skill.

Emotions, Personality and Reading. Several articles have been concerned with the relationship of emotional and personality factors to success or failure in reading. Smith (36) pointed out that psychotherapy as a tool in remedial reading is showing results.

Roman (31) investigated the effectiveness of "tutorial group therapy" in facilitating psycho-social adjustment and correcting some aspects of reading retardation. He used "tutorial group therapy" with one group of delinquent adolescents, group remedial reading instruction with another group, and a program of interview group therapy with another group. He concluded that the greatest positive change in psycho-social adjustment and the greatest improvement in reading took place in the group which received the tutorial group therapy.

Smith, Wood, Downer, and Raygor (35) reported results of gains in reading efficiency among college students when the teaching method was varied for groups of subjects representative of two personality syndromes. The two dimensions of personality used were described as: a generalized anxiety and a permeable or fluidity of structure. Subjects of two types were selected. One was characterized by high anxiety scores with "impermeable" or rigidity of structure; the other was characterized by high anxiety scores with permeability or fluidity of structure. Two separate treatments were used: a directive, highly structured, teacher dominated condition and an non-directive, unstructured, permissive condition. It was found that students characterized as permeable and anxious made optimum progress under directive methods. Those described as impermeable and anxious were, apparently uninfluenced by the teaching method — as inferred from gains in efficiency.

Investigating whether empathy or projection were significantly related to reading comprehension of subjects who were normally adjusted, Alpert (1) concluded that empathy was not related to reading ability in literary or non-literary materials. However, there was a significant tendency for females who showed a higher degree of projection to read literary materials with a higher level of comprehension than did those who maintained a detached, objective attitude. Also, subjects who showed least tendency to project their own feelings and attitudes read with a higher level of comprehension in non-literary materials than did those who had the greatest tendency to project.

Moore (28) found that, with the adults studied, skimming was a skill which was acquired, more or less accidently or incidently, and from sheer necessity. Successful skimming appeared to require certain emotional freedoms which could have outweighed intellectual and reading competencies. Certain personality types found it difficult to bring themselves to the task of skimming.

Reading and College Success

Contradictory evidence concerning the importance of reading ability for college success continues to appear. According to Wagner (46), teaching college students to read more rapidly may be a waste of time. She found only small relationship between reading speed and college success. Comprehension and vocabulary scores had somewhat more of a relationship to success than had reading speed. But more important than any of these was high school average English scores and the score from a "draw-a-person" test.

McDonald (26) compared the academic performance of freshmen who completed the Cornell Reading Improvement Program in the fall semester of 1954 with the academic performance of a control group of freshmen. The process of selecting the controls was designated to equate the groups in respect to motivation towards remedial work. Both groups were stratified on the basis of scholastic aptitude score and were proportional with respect to sex and school or college enrolled. He found that students who completed the Cornell

Reading Program made significantly higher grade point averages, had significantly fewer grade point averages below 70, and showed a markedly greater tendency to remain enrolled in Cornell University than did students of a control group.

Willey and Thompson (50), at New Mexico College of Agricultural and Mechanical Arts, matched pairs of entering freshmen on the basis of ACE scores and Iowa Silent Reading Test scores. One subject from each pair was then enrolled in a program of "developmental reading." At the end of the first semester, the grade point average for the remedial group was 2.13; for the controls the grade point average was 1.73. This difference was reported significant at the .01% level.

Descriptions and Effectiveness of Specific Programs

Articles describing specific programs of reading improvement and their effectiveness continue to appear. Westover and Anderson (49) described a six-weeks, non-credit Reading Improvement Course at the University of Alabama, utilizing reading films and reading manuals. This program produced gains in rate significant at the "1% level or beyond" with no significant change in comprehension. Curtiss (9) described the Reading Improvement Program at Western Reserve were reading films, pacers, tachistoscopes and other materials were used and comprehension was also stressed.

The program at New Mexico College of Agricultural and Mechanical Arts (50) included study skills, library use, exercises in spelling and word meaning, etc., and used these sources: **Making Sense III**, by Leonard and Salisbury; **Standard Test Lessons in Reading**, by McCall and Crabbs, and **Readers Digest.** At the end of one semester a remedial group showed about twice as much improvement in Iowa Silent Reading Test scores as did a matched control group — with the difference reportedly significant at the .01% level of confidence.

In an investigation by Cosper and Kephart (8), students who had taken a one-semester developmental reading course at Purdue were retested fourteen months after the end of the course. It was reported that approximately 60% of the rate gain, as measured by the Diagnostic Reading Test, was retained.

Schick (32) reported the increases in scores made on alternate forms of the Diagnostic Reading Test by executives from nearby industries who took the usual college type program at Purdue. Meeting twice a week for 16 weeks, they used rate accelerators, timed exercises and the Harvard Reading Films. According to Schick, "Confidence in their own reading skills is such that these readers come to the printed page with no fear of loss of understanding at speeds nearly twice those they were accustomed to."

High School Programs. Blough (5) described a twenty-session reading laboratory operated in connection with regular English courses. Laboratory facilities included the Shadowscope Reading Pacer, Iowa Reading Films, SRA Better Reading Books, plus a library of interesting teen age books. Pupils in the laboratory program made greater gains in rate and comprehension — as measured by alternate forms of the Diagnostic Reading Test — than did pupils who had only regular classroom work in English.

The program at the Norview High School (6) in Norfolk, Va., was organized with a view towards improving the following specific reading skills: vocabulary, adaptive rates, oral reading, analytical thinking, synthetic thinking, and reading for appreciation and pleasure. Instruction was given in each selected skill for ten minutes of each class period for two weeks by teachers of four subject matter fields: language arts, social studies, mathematics and science. Instruction in selected skills was also given by teachers of other subjects when applicable to particular classroom activities. This program resulted in a rise of 2.3 in median grade level during a one-year period.

Vopni (45) studied the effect of emphasizing vocabulary in all curriculum areas without de-emphasizing usual curricular goals and concluded that school-wide emphasis on vocabulary produced greater gains in reading test scores than did the "usual procedure."

Mechanical devices. Articles favoring mechanical devices continue to appear. Lawshe and Chandler (20) and Schick (32) strongly recommend reading pacers and reading films for industrial reading programs. Miller (27) recommends various devices, particularly pacers, for school programs, but, interestingly, includes a statement to the effect that "stimulation and motivation during learning accounts for about 90 per cent of all success in reading skills . . ."

Fink (14) attempted to select subjects who were not highly motivated to increase reading speed and gave them training with tachistoscopically exposed digits. He found that reading rate improvement appears to be quite independent of proficiency level reading in digit perception (r = .06) and that tachistoscopic training with digits did not effect major changes in average fixation during or in the number of fixations but that there did seem to be an extinction of regressive movements.

Tillson (40) in the developmental reading course at Purdue, used reading films, essays read under timed conditions, and books and magazines read with mechanical pacers. At the beginning of the course the subjects' eye-movements were recorded with the oculograph. As motivation, the implications of the graph and changes possible were discussed. The post-test with the oculograph — when compared with the pre-test — showed fewer fixations, fewer regressive movements, and speed and comprehension scores also inclosed.

In a business situation, MacKinney (23) investigated the effectiveness of tachistoscopic training in increasing the on-the-job productivity of personnel in three clerical jobs: Punch Card Operator, Central File Clerk, and Hospital Admissions Clerks (the latter are claim-processing people). Twenty-four 30-minute training sessions were given over a period of five weeks, using a wide variety of stimulus materials. Using experimental group-control group comparisons, on the Minnesota Clerical Test, both groups showed an increase but the residual gain of the experimental group was significant at the 10% level on the Number section of the test and at the 1% level on the Names section. Using on-the-job criteria: the tachistoscopic training had "no noticeable effect" upon performance of the Card Punch and Central File jobs; for the Hospital Admissions job the experimental group decreased the time required to do the criterion task significantly (5% level) more than did the control group.

Comparative Evaluations. Glock (16), using high school pupils as subjects, set up three experimental groups and a control group. Group 1 received tachistoscopic training according to the manual of instructions for the Keystone Tachistoscope. Group 2 used the Iowa Reading Films. Group 3 was referred to as the "Determined Effort" group in which improvement in reading was encouraged through use of interesting reading materials, vocabulary study, and periodic talks by members of the school staff emphasizing the importance of improvement. Using alternate forms of the Iowa Silent Reading Test and treating the results with analysis of covariance, he concluded that the "determined effort" group showed a statistically more significant increase in reading rate than either of the other two experimental groups. While there was no significant change in rate of comprehension, the "determined effort" group made significant gains in the amount comprehended in unit of time.

Marvel (25) also using high school pupils as subjects, set up three experimental groups and a control group for his investigation. Each of the experimental groups had a total of sixteen 20-minute training sessions spaced over eight weeks. The first group received tachistoscopic training with a variety of targets, and the instructor discussed mechanical, psychological, and sociological aspects of reading and good habits of reading. Care was exercised so as not to mention speed of reading. The second training group received the same treatment with the exception that the instructor's introductory remarks and the remarks accompanying the tachistoscopic slides were designed to create a "mind set" toward increasing speed of reading. The third group received no tachistoscopic training but instead were given instructions dealing with correct reading mechanics and simple rules to be observed in effective reading and the attempt was made to create a set for speed. At each training session they also read a 1000-word rate check taken from a supplementary

American Literature book. On the basis of scores from alternate forms of the Diagnostic Reading Test, it was concluded: (1) that verbal "set" emerged at the most significant manipulable variable. The group which received only verbal "set" and read the literature passages not only attained greater rate during the training period but also retained more of the gains when retested nine weeks after the end of the training period; (2) that tachistoscopic training — with or without verbal "set" — was ineffective as a means of producing statistically significant gains in reading rate and comprehension. However, tachistoscopic training with set for speed did produce greater gains than did the training without the set; (3) that comprehension performance, as measured, was not affected by either method employed.

In an investigation by Wilson (51) six groups constituting twelve high school English classes were used as subjects. Group I, in addition to the regular literature units, had fifty 30-minute sessions of tachistoscopic exercises. Group II had the same literature units supplemented by fifty 30-minute sessions with a rate accelerator. Group III followed the same literature assignments and used both the tachistoscope and accelerator during the fifty supplementary training sessions. Group IV used the same literature units supplemented by work books and other "non-mechanical media" for improving reading skills. Group V participated in a "guided free-reading program" in which pupils chose books and shared reading experiences in a wide variety of individual and group ways. Group VI, the "control" group pursued the regular course of study which included a one-minute weekly drill with easy material for the purpose of increasing speed and gaining insight into the importance of vocabulary growth. Analyzing scores from alternate forms of the Iowa Silent Reading Test and alternate forms of the Diagnostic Reading Test (Survey Section) it was concluded that (1) tachistoscopic training, as administered in this experiment, did not effect a perceptible increase in rate; (2) the accelerator, used alone, produced statistically significant gains in rate; (3) the guided free reading program "cared for reading skills as well as or better than other methods" — except for rate and vocabulary as tested by the Diagnostic Reading Tests.

Sheldon (33) concluded that various types of mechanical instruments have their place in the classroom but that they are not a necessity. Wiltse (52) described an all-school program and concluded that "if pupils really want to improve their reading ability and enthusiastic teachers are sensitized to the problem, reading improvement is sure to result from almost any kind of reading improvement program."

Vernon (44) reported that mechanical devices "put the cart before the horse." He wrote, "Devices which compel the readers eyes to move at an even speed whatever the nature of the material read, or his intention in reading it, might in the long run destroy the flexibility necessary for intelligent reading." He indicated that what is needed is training in understanding — especially of the more difficult words and ideas — and in passing rapidly over the minor details while assimilating the general ideas.

Speed vs. Comprehension

Other articles have questioned the speed orientation in reading programs. In addition to the study by Wagner (46) mentioned earlier, Zerfoss (55) pointed out that speed may be overemphasized. He stated, "It is not how fast you read, nor how much, but how well you read that counts." He discussed principles and techniques to increase meaningfulness and usefulness of materials read. Leichty (21) argued against an emphasis on speed and said rather that we should teach students to read more slowly in order to do critical reading, reading for appreciation and aesthetic purposes.

Black (4) discussed the results of a study designed to investigate the types of comprehensions errors he had previously detected in students' normal reading of novels, textbooks, and newspapers. He listed eight categories of errors: (1) Failure to understand a writer's intention; (2) Failure to detect irony; (3) Difficult words — new words, multiple meanings, obsolete, technical, difficult context; (4) Difficult allusions; (5) Illustrative examples or metaphors not understood; (6) Inadequate background information; (7) Failures to see how context influences meaning; and (8) Readers' preconceptions.

He concluded that: although his study "subdivided the act of comprehension into eight facets, any attempt to measure their relative importance would be hindered by the fact that when a reader misinterprets what he reads several types of error are often linked together; since several kinds of reading ability need to be combined, and error is never simple."

The above reports may lend all the more credence to such articles as Davis (10) which stresses that while instruction in the mechanics of reading is important, systematic training should also be given in comprehension skills, and the article by Staiger and Bliesmer (37) who suggest ways of helping improve students' comprehension.

Testing

Dissatisfied with tests of reading comprehension, Ward (47) briefly described the development of a test to measure: speed, flexibility, understanding of ideas, and knowledge of words. Used experimentally with developmental reading classes at Purdue, it was found that gains, in general, were commensurate with results as measured by other tests customarily used in the program. However, flexibility scores decreased, which finding the author stated, raised some theoretical and practical questions which still need answers. Dunlap (11) reported the development of a reading test for industrial supervisors with an approximate educational range for fourth grade through college graduate. He suggested a reading ease formula which might provide a practical guide to intelligible communication in industry.

Humphrey (17), with a college population as subjects, used three amount-limit type tests of different lengths, and three time-limit type tests with different time limits. He concluded that in measuring rate of reading, as defined by the tests used in the investigation, the fairly short (four-minute) time-limit tests appeared to be about as valid as other tests which require more time or are more difficult to administer.

I would like to close this paper by mentioning two articles of contradictory nature. They would not be considered reports of research as such but I'm sure that some investigation and study went on before the articles were released. And they do have some rather interesting implications. The one (18) is a statement from the Subcommittee on the Improvement of Reading, of the Commission on Research and Science, of the North Central Association of Colleges and Universities. It is the thesis of this report that all secondary and college teachers should assume responsibility for improving the reading proficiency of their students. Three basic approaches to group instruction are suggested: (1) Aid each subject matter instructor to become aware of problems in reading and ways he can help meet the problem in his own classroom. (2) Allow time in the language arts program for reading along with composition, language, and literature. (3) Provide intensive instruction with well-qualified teachers using specialized remedial diagnosis and therapy for the poorest readers.

The other articles refers to the announcement (New York Times, December 24, 1955) that the trustees of the University of Illinois voted that beginning with the school year in 1960 "to discontinue a remedial (English) course that has been provided for more than twenty years."

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PART II

FACULTY AND PUBLIC RELATIONS ASPECTS OF THE COLLEGE READING PROGRAM

by Louie E. Harris

The Reading "R" is the only one of the three fundamental tools of Education that is used without the help of mechanical aids.

Writing is aided by shorthand methods, typewriters, dictating machines and the printing press. Arithmetic is aided by slide rules, comptometer and electric brains. Reading still depends on individual ability.

In this age of super-sonic speed, atomic energy and automation, reading stands alone, bare-handed, clawing the meaning from the written language.

There is no reason to continually defend the teaching of reading at the college level. The question so frequently asked by college professors, deans, parents and students, "Why is it necessary to teach reading at the college level ", has been answered by research in the reading process.

Here are some of the reasons given:

1. Reading is a process which is never completely mastered; most people can improve their reading ability.

2. Because of reading demands, a new approach to increasing reading efficiency is needed.

3. Reading demands continuous and specific practice in order to maintain a high level of efficiency.

4. Tests of college students reveal that their reading skills are far below their potential.

The Director of the College Reading Program should devote more time and effort in informing the public of the aims and achievements of the reading programs of higher education.

The American public is being informed and re-informed that you can't educate a jet pilot for the same money required to train a stage coach driver. Surely the public also needs to be informed that you can't educate the jet pilot with the same course of study that was used to train the stage coach driver.

The college faculty also needs to be enlightened on the college reading program. However, the results hardly justify the effort, as the faculty members are engrossed in their own fields.

It seems that most students enroll in the reading classes upon the rrecommendation of someone outside the campus or from a fellow student.

One of the ways of keeping the public informed is through publicity, not advertising, not sensationalism, but simply by the means of extending education beyond the classroom. The college reading instructor needs to do through the newspaper, radio, television and public appearances the same things that he does in his reading class.

A superintendent recently wanted to start a reading program in his schools. Two colleges cooperated by holding extension classes and reading workshops for his faculty over a period of two years. Administrative and faculty interest was very keen for a reading program, but the program did not get under way. Finally, for a three-week period, demonstration in reading improvement was presented to all the civic clubs within the community. The local newspaper cooperated by writing stories before and following the demonstration. The school was able to start their reading class immediately due to the interest and support of the public.

The College Reading Program is here to stay and is wielding a big influence on reading in the secondary and elementary schools. Let's stop explaining to those who do not want to improve their reading efficiency why it is necessary to teach reading at the college level and spend our efforts with those who realize that getting meaning from the printed page depends on the individual's ability and efficiency.

EVALUATION OF WORKBOOKS FOR COLLEGE READING PROGRAMS

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To prevent any misunderstanding of the purpose of this presentation, the writer should clarify the title. This is not an attempt to evaluate current workbooks in the sense of establishing ratings or of telling you which is the best or the poorest of those now on the market. That is a matter for each reading instructor to decide in the light of his own program and his own needs. The purpose of this article is to help you to recognize some of the criteria for selection that may be important to you, and to summarize for you some of the more significant features of specific workbooks now on the market.

In the survey of college reading programs made by the Southwest Reading Conference last year, over 400 schools returned questionnaires about their programs. Of this group, 88% indicated a use of reading workbooks of some kind. Some listed a single workbook as basic to their program, others listed several workbooks used. Only 51 programs indicated no use of workbooks at all. This probably is indicative of a trend toward more individualization of instruction in developmental reading. Many of us have observed a decreasing use of some of the mechanical approaches to group instruction in reading, and many reading instructors have found that workbooks can be used effectively in group situations and can satisfy many needs of the reading program which had been met earlier only through the use of films or other mechanical stimuli.

Use of Workbooks Varies

One of the basic problems in selecting a workbook is that of determining how it fits into the reading instructors program. This of course depends upon his own concept of the use of workbooks. Some use workbook materials for practice on reading accelerations; others use such materials independently from accelerators for basic practice exercises.

Some use workbooks for supervised individual practice in class; others use them for unsupervised individual practice in the laboratory or outside the reading classroom. Some use workbooks to supplement the class practice with films, accelerators, or tachistoscopes; others use the workbook in place of these devices and structure the training periods around carefully timed and controlled experiences in reading from workbooks. Each use demands different characteristics of the workbooks if they are to be used as efficient tools for classroom instruction and practice.

The Concept of Reading Efficiency

Most reading instructors become aware very early in their work of the danger of overemphasis on reading rate. On the other hand, many have experienced the problem of the individual who seems to be blocked from any material progress in reading skill because he is too concerned with the factor of comprehension. The basic question of how to decrease this fear of comprehension loss and yet to maintain the importance of idea content in reading has been a significant one in developing any reading program. Several reading instructors have experimented with some attempts to combine the two factors into one score. Thus we find such terms as "reading score," "critical score," "reading index," "reading efficiency," "index of reading efficiency," "comprehension score," etc. Almost all of these involve a computation of the rate (in words per minute) and the comprehension (in terms of percentage of questions answered correctly). The most common combination of these factors is the simple product of the rate and the percent comprehension figure. This yields a score which might be described as a "rate of reading and understanding," or an "effective rate of reading," Comparisons of these scores during reading practice gives a more consistent picture of improvement and discourages extreme interpretations of progress in rate and extreme depression over temporary drops in comprehension. This writer prefers the use of the term **reading efficiency** to describe this combined factor. In evaluating workbooks, the reading instructor might be concerned about provisions made for computing and comparing this combination factor of reading skill.

Publishing Trends

Althouugh Luella Cole Pressey published a **Manual of Reading Exercises for Freshmen** as early as 1928, few other reading manuals appeared on the market before 1950. In the period when most college reading programs were beginning to develop rapidly, instructors were faced with a limited choice of laboratory manuals. During the period from 1951 to 1953, many instructors were experimenting in their own classes with workbook materials of various kinds and during that period another half dozen college level workbooks were published. Some were of limited and localized usage, however, and were not widely accepted. Others seemed to have suitable materials for many other programs. With the year 1954 came a rush of publication activity, however, and many workbooks of various types began to appear in the reading instructors mail. Of the 33 workbooks reviewed here, five were published in 1954, five in 1955, and ten in 1956. With this wide variety to study, the reading instructor can afford now to be more selective than ever before in choosing the laboratory materials best suited for his program.

Criteria for Selection

The wide range of materials available creates a problem in itself, however, as heavy demands for service in the reading programs leaves most reading instructors with very limited time for careful analysis of new workbooks. It is the writers hope that the work presented in this article might serve as a timesaver for those interested in reviewing and selecting new laboratory materials for their programs. The writer has attempted to do two things in this article — first, to identify certain criteria which might be important in the selection of a workbook, and, second, to review several of the current workbooks on the market and determine the extent to which they satisfy these criteria. In the material which follows, the criteria will be identified and the organization of the analysis chart will be explained.

Basic Data

In the accompaning chart each book has been identified by author, title, publisher and date of publication. The type of binding has been identified as cloth (C) or paper (P) as a general indication of the quality and permanence of binding. Most of the expendable workbooks are paper bound to reduce cost. Each book is identified as to length and portion devoted to exercises to help compare the quantities of exercise material provided. The column labeled "Type of Organization" classified each workbook into one of four general types as follows:

A. Short pamphlet type materials devoted largely to discussion of theory and suggestions of exercises, but with limited exercise material in the workbook itself.

B. Workbooks of medium length made up predominately of exercise material for student use. Expendable workbooks to be discarded after use by one student.

C. A textbook type of organization with more permanent binding and with limited exercise materials. Although some exercises are provided, the general format and organization tends to discourage writing in the book itself.

D. Paired sets of materials in which the reading material is presented in one book with fairly permanent binding and exercises to match are provided in a second book which is a paper-bound workbook type.

Types of Exercises

In identifying the number of types of exercises, some books are identified with a "V" to indicate varied patterns. These usually include many different types of exercises presented in connection with text material and with no specific organization or frequency of occurance. Some workbooks are identified as having only one basic type of exercise and others with from 2 to 12 different types. These with specific types are organized with definite patterns of exercises designed to serve specific purposes in the reading program. The checks in the columns which follow indicate some of the more common types of exercises found in these workbooks.

Eye span exercises include those identified as contributing to the increase of eye span. One of the most common

AN ANALYSIS OF SOME OF THE LEADING WORKBOOKS IN COLLEGE READING PROGRAMS

by Lyle L. Miller

A condensed review of some of the currently used reading manuals in terms of some of the basic features of organization, types of reading drill exercises provided, length of reading materials, and special administrative features. These items listed under special features are those which seem to facilitate the use of the workbook and to provide a better basis for interpretation of results and progress. Many of these features were missing in the earlier workbooks published, but there now seems to be a trend toward increasing emphasis on these points. Some features may seem very important to some instructors and of minor importance to others, but all are worthy of some consideration in selecting materials.

#	AUTHOR	TITLE	PUBLISHER	PUB. DAT
1.	Altick, Richard D.	Preface to Critical Reading	Henry Holt	1956
2.	Ashlin, Mark, G.J. Kalb & S.M. Tave	Reading Literature	Scott Foresman	1955
3.	Baker, William D.	Reading Skills	Prentice Hall	1953
4.	Brown, James I.	Efficient Reading	D. C. Heath	1952
5.	Brown, James I.	Efficient Reading, Alternate Edition	D. C. Heath	1956
6.	Cosper, Russell & E.G. Griffin	Toward Better Reading Skill	Appleton Century Crofts	1953
7.	Dallman, Martha & M. Sheridan	Better Reading in College	Ronald Press	1954
8.	Garner, W.L., D.G. Pugh & D.E. Wylder	Reading Factual Prose	Scott Foresman	1955
9.	Gilbert, Doris W.	Power and Speed in Reading	Prentice Hall	1956
10.	Glock, Marvin D.	Improvement of College Reading	Houghton Mifflin	1954
11.	Hart, Mark	4 Star College Word Power	Markhart Educational Service	1949
12.	Jones, Everett L.	An Approach to College Reading	Henry Holt	1954
13.	Judson, Horace and H. Baldridge	The Techniques of Reading	Harcourt, Brace & Co.	1954
14.	Kelley, Victor and Harry Green	Better Reading and Study Habits	World Book Co.	1949
15.	Leedy, Paul	Reading Improvement for Adults	McGraw Hill	1956
16.	Lewis, Norman	How to Get More Out of Your Reading	Doubleday and Co.	1951
17.	Lewis, Norman	How to Read Better and Faster	Thomas Y. Crowell	1944
18.	McCallister, James M.	Purposeful Reading in College	Appleton Century Crofts	1942
19.	Miller, Lyle L.	Increasing Reading Efficiency	Henry Holt	1956
20.	Perceptual Development Laboratories	Comprehension Test Book	Perceptual Development Laboratories	1956
21.	Pressey, Luella C.	Manual of Reading Exercises for Freshmen	Ohio State University Press	1928
22.	Pressey, Benfield and Robert Baer	Readings for Comprehension	Charles Scribners	1951
23.	Robbins, A. Allen	Word Study for Improved Reading	Globe Book Co.	1954
24.	Shaw, Phillip B.	Effective Reading and Learning	Thomas Y. Crowell	1955
25.	Spache, George D. and Paul Berg	The Art of Efficient Reading (Red Book)	MacMillan Co.	1955
26.	Spache, George D. and Paul Berg	The Art of Efficient Reading (Black Book)	MacMillan Co.	1955
27.	Strang, Ruth	Study Type of Reading Exercises	Columbia University Press	1951
28.	Stroud, James B., Ammons and Bamman	Improving Reading Ability	Appleton Century Crofts	1956
29.	Triggs, Frances O.	Improve Your Reading	U. of Minnesota Press	1945
30.	Weber, Christian O.	Reading and Vocabulary Development	Prentice Hall	1956
31.	Wise, J.H., Congleton, and Morris	The Meaning of Reading (4th Edition)	Harcourt Brace	1956
32.	Witty, Paul	How to Become a Better Reader	Science Research Associates	1953
33.	Witty, Paul	How to Improve Your Reading	Science Research Associates	1956

BASIC DATA					TYPES OF EXERCISES								LENGTH			SPECIAL FEATURES							EXTENT OF USE		NUMBER
Type of Binding	Number of Pages	Portion of Book Devoted to Exercises	Type of Organization	Number of Types of Exercises	Eye Span Exercises	Number & Letter Recognition	Word Meaning & Vocabulary	Phrase & Sentence Meaning	Skimming or Idea Reading	Exploratory or Continuous	Study or Thinking	Critical or Analytical	Exercises under 800 Words	Exercises 800 to 2000 Words	Exercises over 2000 Words	Removable Answer Sheets	Standardized Patterns for Tests and Scoring	Established and Identified Levels of Reading Difficulty	Instructors Manual Provided	Scoring Keys Provided	Time-Rate Conversion Tables	Progress Graphs as Visual Aids to Motivation	Number of Colleges Using Singly	Number of Colleges using in Some Combination with Other Workbooks	
C	298	Little	C	1							X	X			X	N	N	N	N	N	N	N	0	0	1.
P	63	All	D	1							X	X		X	X	N	N	N	N	N	N	N	0	0	2.
P	120	All	B	2							X			X		Y	P	N	Y	Y	Y	Y	18	37	3.
P	300	All	B	3			X		X	X				X	X	Y	N	Y	Y	Y	Y	N	4	32	4.
P	302	All	B	3			X		X	X				X	X	Y	Y	Y	Y	Y	Y	N	4	32	5.
P	221	All	B	1			X			X		X		X		Y	Y	Y	N	Y	Y	N	5	14	6.
P	308	Most	B	V			X	X				X	X	X		N	N	N	Y	Y	Y	N	0	11	7.
P	64	All	D	3			X				X	X		X	X	N	N	N	N	N	N	N	0	0	8.
P	235	All	D	V	X	X	X		X		X		X	X	X	N	N	N	Y	Y	Y	Y	2	2	9.
P	307	All	B	7	X	X	X		X	X	X	X	X	X		Y	N	N	N	Y	Y	Y	16	29	10.
P	206	All	B	1			X						NONE			N	Y	N	N	Y	N	N	0	1	11.
P	856	All	B	2						X					X	Y	Y	N	N	N	N	N	2	5	12.
P	406	Most	B	10	X		X	X	X	X	X		X	X	X	Y	Y	P	Y	Y	Y	Y	14	17	13.
P	73	50%	B	V			X		X				X	X		N	N	N	N	N	N	N	1	2	14.
C	456	30%	C	V	X		X	X	X	X	X	X	X	X	X	N	N	N	N	Y	Y	Y	0	0	15.
P	400	Little	C	V							X	X	X	X		N	N	N	N	N	N	N	0	9	16.
P	416	75%	C	V	X	X	X	X	X	X	X		X	X	X	N	N	N	N	Y	Y	Y	7	27	17.
P	370	Half	C	V							X		X			N	Y	N	Y	Y	Y	Y	0	0	18.
P	303	All	B	7	X		X	X	X	X	X	X	X	X		Y	Y	Y	Y	Y	YY	Y	14	18	19.
P	22	All	D	1										X		N	Y	Y	Y	Y	Y	Y	0	0	20.
P	112	Most	B	V	X					X	X	X		X	X	N	N	N	N	N	N	N	0	2	21.
C	557	Little	C	1							X				X	N	N	N	N	N	N	N	0	0	22.
P	100	All	B	V			X						NONE			N	N	N	N	N	N	N	0	0	23.
C	445	30%	C	3			X		X	X				X	X	N	N	N	N	Y	Y	Y	2	15	24.
P	273	55%	B	V			X		X	X	X	X		X	X	N	N	N	Y	Y	N	N	[illegible]	5	25.
P	241	55%	B	V			X		X	X	X	X		X	X	Y	N	N	Y	Y	N	N	4	5	26.
P	152	All	B	1					X	X	X			X		N	Y	N	Y	Y	N	N	10	14	27.
P	285	All	B	12		X	X	X	X	X	X	X	X	X	X	N	N	N	N	P	Y	N	8	23	28.
P	137	Most	A	V	X		X		X	X	X	X	X	X		N	N	N	Y	Y	N	N	5	7	29.
P	168	All	B	V			X	X			X	X	X	X		N	N	N	Y	Y	N	N	2	4	30.
P	124	All	D	V			X			X	X	X		X	X	N	N	N	Y	Y	N	Y	—	2	31.
C	316	30%	C	V			X	X		X	X	X	X	X		N	P	N	N	Y	Y	Y	13	41	32.
S	380	30%	C	V			X					X		X	X	N	P	N	Y	Y	Y	Y	1	1	33

type of eye span exercises is the pyramid arrangement where the reader is asked to keep his eyes focused on the middle point in the line and read down a column of increasingly longer lines. Although fairly common in some of the earlier workbooks, this type of exercise seems to be appearing less frequently in later publications.

Number and letter recognition exercises are those designed primarily to increase the rate of eye movement by training in rapid recognition of similar combinations of numbers or letters. A typical example of these is the exercise with a key column and five other columns in which the key items are repeated. Although used extensively in reading programs a few years ago, many reading instructors seem to have abandoned this type of exercise. Only five of the workbooks reviewed contained this type of exercise.

Word meaning and vocabulary exercises are the most common type and are found in almost every workbook reviewed. The most frequent pattern is that of the identification of synonyms from a column of key words and succeeding columns in which the synonym occurs. Some exercises go further with provisions for dictionary study or with work analysis types of vocabulary drill.

Phrase and sentence meaning exercises appear in about half of the workbooks reviewed. These vary in pattern but most of them involve speeded recognition of thought units, with shorter phrases presented first and with a gradual increase toward fairly long phrases to be recognized as units of thought. The major function of these exercises seems to be the recognition of meaning through identification of key words and through increased eye span.

Skimming or idea reading exercises appear in a majority of the workbooks. In these the basic purpose seems to be the development of maximum rates with comprehension limited to the key ideas or major trends of thought. Usually these are presented as short paragraph sequences in which headings, sentence structure, or content organization may be used as clues to rapid identification of the major ideas.

Exploratory or continuous reading exercises appear under a variety of identifying labels. Basically these exercises are longer than the skimming type and place a greater stress on more detailed understanding of the materials read. They encourage the application of rapid reading techniques over a longer period of time and place a greater emphasis on continued concentration. Most of the workbooks reviewed included some exercises of this type. Some of them, particularly those of the type with paired reading books and workbooks seemed to be predominately of this type of exercise to the exclusion of most other types except the study type.

Study or thinking exercises are found in most of the workbooks. These exercises are organized in various ways that encourage the reader to stop and think or to take notes on what he is reading. The basic purpose of these exercises seems to be to improve the techniques of understanding and involve the application of sound study habits, the recognition of content organization and the use of clue words and phrases. Although rapid reading rate is not the primary goal of these exercises, they are frequently arranged in a paired arrangement with the exploratory type to illustrate to the student that he can take time to think and organize material without a serious decline in rate.

Critical or analytical reading exercises appear in many of the workbooks reviewed. These exercises stress the importance of looking for clues as to author's purpose, author's bias, and other factors which might slant the interpretation of the material. Basically this approach is designed to develop a consciousness of propaganda techniques and to develop intelligent selectivity in reading habits.

Length of Reading Exercises

Many workbooks do not identify the length of reading selections; others have been careful to standardize similar exercises to a consistent length throughout a series or the entire workbook. For purposes of comparison this writer has attempted to analyze workbooks in terms of three general classifications — short, medium and long exercises. Those under 800 words in length are usually of the idea or skimming type. Those from 800 to 2000 words in length are good for class practice in five or ten minute reading tests. Those over

2000 words in length provide better practice for study type of reading or for practice in maintaining rate and concentration for longer periods of time.

Special Features

Reading instructors usually are busy people and therefore quite concerned about features of workbooks that will save them time in administration. Different patterns of organization of reading progress make some features more desirable one place than another, but most of the items compared in this section are of concern to some instructors.

In presenting this data on special features, the writer wishes to point out that he has attempted to determine the availability of these materials, but that in at least one case he knows of an instructors manual which has not been provided by the publisher. Even though the instructor's manual seems to be a very important factor in the decision to use or not to use the workbook in a program, it is surprising to find that some publishers do not advertise the availability of such a manual and do not supply one unless the prospective user writes to ask specifically about this resource material. In the case of one of the books reviewed, the author refers to an instructors manual in his preface. In replying to a letter asking for this manual, however, the publisher sent back a note that no such manual was provided for this workbook. In such cases the materials have been reviewed in terms of materials made available by the publisher for review. Scoring keys and instructors manuals may exist, but they are not summarized in this review unless the publisher made them available on request for this writer.

Removable answer sheets are important to many instructors who depend on clerical help to record scores on reading progress, or who wish to analyze individual progress records outside of class. Only about a third of the workbooks reviewed provided perforated pages for easy removal of the exercises. Many of the workbooks overlap exercises on pages in such a way that answer sections could not be removed without destroying the succeeding exercise as well.

Standardized patterns for tests and scoring. Although most manuals provide comprehension tests and encourage comparison of results, many of them do not attempt to standardize materials to make such results comparable. For example, the comprehension score on a ten question, true-false test would not be comparable to the comprehension score on a seven question, completion test. The chance factor of guessing is quite different in the two tests. Many workbooks actually slow down the classroom procedure by having varied length of tests. Odd numbers of questions such as 13, 18, etc., involve a more complex arithmetical process for calculating percent comprehension. Many of the workbooks utilize patterns of ten or twenty questions so that results can be converted easily to comprehension scores. Some are planned carefully to provide the same type of questions on all exercises thus keeping the effect of guessing at a minimum. Some of these keep all questions of the same type while others maintain a balanced pattern of combinations of objective type questions. For the instructor who wishes to place emphasis on comprehension or efficiency and to stimulate self evaluation of progress in a series of exercises, this factor can be a very important one in selection of a workbook. Despite the apparent importance of this factor, however, only about a third of the workbooks reviewed seem to have recognized this point in their organization.

Established and identified levels of reading difficulty are of interest to some instructors who wish to select materials for individual practice, or who wish to plan a continuity which will involve a gradual increase in reading difficulty. Although reading formulii for college reading materials are still very controversial, many reading instructors do use some means of evaluating difficulty of reading. Some workbook authors have grouped articles into a few areas of reading difficulty without identifying their basis of evaluation of difficulty. Others have used a formula and identified reading difficulty by readability scores for each article. These usually are arranged in an ascending order of reading difficulty in each series. Despite differences of opinion on this matter, the basic principle of structuring material at levels appropriate to the individual student is important, and one can see that sharp differences in reading difficulty effect the reading rate and efficiency scores and make comparisons invalid. Despite this fact, however, only about one sixth of the workbooks reviewed indicated any identified pattern of reading difficulty level on the exercises.

Provision of an instructors manual is of vital importance to an instructor using material for the first time, yet only half of the workbooks reviewed seemed to have such a resource guide available. Some of the other include some directions to the instructor in the preface materials, but many seem to take it for granted that the workbook can be used effectively without such resource material.

Provision of scoring keys makes the use of the workbook much simpler for an instructor, but almost a third of the workbooks require the instructor to make up his own keys for scoring. For some types of usage the scoring key would be an essential aspect of the effectiveness of the material. This writer feels that any author or publisher should provide such scoring keys, either in the workbook, itself, or in a supplementary teachers guide. Most reading instructors simply do not have the time to develop their own keys for all of the workbook materials they use.

Provision of time-rate conversion tables can save a great deal of classroom time for further reading work. Although all students in the reading class should be able to do simple multiplication and division, it has been this writers experience that frequently a whole group would be delayed because of this laborious process. Use of a preplanned conversion table speeds up the class process and allows an instructor to focus on reading skills rather than mathematical skills. One might be concerned as to the form of the conversion table, however. Most of those provided set up time intervals in minutes and seconds, or in seconds only. One workbook, however uses decimal portions of minutes as the time interval base. Unless an instructor has a stop watch specifically calibrated for decimal portions of minutes, this table would not be very helpful to him. Since only about half of the workbooks reviewed provide such conversion tables, the relative value of such tables seems to be one point which instructors might observe carefully in selecting a workbook.

Provision of progress charts as visual aids to motivation is a feature provided by only about a third of the workbooks reviewed. Reading instructors who have worked with visual aids certainly are aware of the comparative values of graphic presentations in developing self insight and understanding. The very process of having the student make a progress graph may be a significant motivational factor in stimulating him to further improvement in his reading habits. The type of graph provided should be considered carefully by the instructor since some types may have advantages over others. Some workbooks provide a single graph on which all types of exercises are recorded while others provide different graphs or combinations of graphs for various purposes.

Extent of Use

The data presented in these columns is summarized from the responses to the questionnaire sent out by the Southwest Reading Conference last year and from individual correspondence which the writer has had with a number of instructors in college reading programs. In all, the table summarized data from about 430 different reading programs in colleges and junior colleges throughout the United States. Two types of usage have been defined, however. Some schools identify a workbook as the only one used in their program. Others indicate a combination of several workbooks used in the program. Sometimes these combinations seem to be with study habits workbooks or textbooks rather than other reading workbooks, but this distinction could not be made consistently, so any case listing more than one book used in the reading program was included in the second category.

The summary is presented in terms of number of schools using certain materials rather than number of individual students. Therefore a use of a workbook by one school having several hundred students in the reading program might represent a much more extensive use of the workbook than the use by several smaller schools with limited enrollments. In considering this data, one should remember, however, that many of these workbooks have been published within the last two years and have had limited opportunity to be put in use by the time this data was gathered.

Summary

The reading instructor today finds a wider range of selection of materials with which to carry on his reading program. He needs to select carefully those materials which will provide the best basis for experimental study in new techniques. In this article, the writer has reviewed some of the features which might be considered in making such selections and has presented a summary analysis of thirty-three of the leading workbooks on the current market for college and adult reading programs. It is his hope that this summary may serve as a time saver to other reading instructors in identifying those workbooks which seem to have the best possibilities for their specific programs.

MATERIALS FOR THE MORE RETARDED COLLEGE READER

Emery P. Bliesmer
University of Texas

A considerable number of practice-type materials intended for use with college students in reading improvement programs is now available. An extensive, annotated listing of such materials was presented in the **Fifth Yearbook of the Southwest Reading Conference*** and another list has been included in the present Yearbook (See Miller's list, pp. 75.) Some of these materials, however, have been found to be rather difficult for the more retarded readers comprising a part of the group in many college programs. Some of the materials intended for use at lower levels have been used to some extent with these retarded readers, with apparently effective results. An annotated listing of such materials is presented below. Depending upon the initiative and experience of the instructor, most of these offer various possibilities for purposes of adapting, improvising, providing for specific individual needs, and the like. While preparation of this list involved somewhat thorough study and consideration of a considerable number of materials, no pretense of all-inclusiveness is made.

Bellafiore, Joseph. **Adventures With Words.** New York: Amsco School Publications, Inc., 1945-47.

One book at each of four levels. Various types of exercises involving synonyms, antonyms, context clues, slanted meanings, words for particular situations or purposes, idioms, usage, key words, derivations, and the like.

Difficulty levels — Book 1: Gr. 9; Book 2: Gr. 10; Book 3: Gr. 11.

Price: 60 cents per book.

Gates, Arthur I. and Peardon, Celeste C. **Gates-Peardon Practice Exercises in Reading.** New York: Bureau of Publications, Teachers College, Columbia University, 1944.

Four booklets at each of various levels, each booklet providing practice exercises for one of the following four types of skills: Type A (appreciating general significance of a selection), Type B (predicting outcome of given events), Type C (understanding precise directions), Type D (denoting details).

Difficulty levels — Book 3: Gr. 3 - 6; Book 4: Gr. 5 - 9.

Price: 35 cents per booklet.

Guiler, W. S. and Coleman, J. H. **Reading for Meaning.** New York: J. G. Lippincott Company, 1955.

One book available for each of 9 grade levels. Twenty-six units of practice exercises in each book. Each unit consists of short selection, followed by groups of exercises for developing skills related to word meanings, total meaning, central thought, detail meanings, organization, and summarizing.

Difficulty levels — One book for each of grade levels 4 through 12; book number indicates grade level.

Price: 88 cents per booklet.

Hardwick, H. C. **Words Are Important.** Maplewood, New Jersey: C. S. Hammond and Company, 1947-55.

Seven books at each of various difficulty levels. Eighteen lessons for word study and vocabulary improvement in each book; also frequent review exercises. Each lesson includes writing definitions of words, filling in sentence blanks with right word from list, and choosing, for sentence blanks, right one of commonly or easily confused words.

Difficulty levels — Junior Bk: Gr. 7; Introductory Bk.: Gr. 8; First Book: Gr. 9; Second Book: Gr. 10; Third Book: Gr. 11; Fourth Book: Gr. 12; Fifth Book: College level.

Price: 35 cents per book.

Johnson, Eleanor M. and others. **Reading Skilltexts: Modern Reading.** Columbus, Ohio: Charles E. Merrill Company, 1946-47.

One book for each of three levels. Each book contains a number of selections; each selection followed by exercises for 5 reading skills: understanding ideas, interpreting ideas, organizing ideas, understanding words, studying words.

Difficulty levels — Book 1: Gr. 7; Book 2: Gr. 8; Book 3: Gr. 9.

Price: 42 cents per book.

Kelley, Victor H. and Green, Harry A. **Better Reading and Study Habits.** Yonkers-on-Hudson, New York: World Book Company, 1947.

This book consists of twelve short chapters, each one discussing and analyzing some phase of reading or study habits. Various types of exercises related to the phase being treated are found at end of each chapter.

Difficulty level — high school.

Price: 60 cents each.

McCall, William A. and Crabbs, Lelah Mae. **McCall-Crabbs Standard Test Lessons in Reading** (1950 edition). New York: Bureau of Publications, Teachers College, Columbia University, 1950.

One booklet containing rate and comprehension exercises for each of five difficulty levels. Books D and E might be of use with some retarded groups. Seventy-eight brief selections in each booklet, each selection being followed by short comprehension check.

Difficulty levels — Book D: Gr. 5 - 7; Book E: Gr. 7 - 12.

Price: 36½ cents per booklet.

Monroe, Marion, Horsman, Gwen, and Gray, William S. **Basic Reading Skills for High School Use.** Chicago: Scott, Foresman and Company.

Contains many types of exercises and activities and provides review of reading skills developed in grades 4 through 9.

Difficulty level — Gr. 9.

Price: 80 cents per copy.

Simpson, Elizabeth A. **SRA Better Reading Books.** Chicago: Science Research Associates, 1950-51.

One book at each of 3 levels. Each book contains 20 selections for measuring rate. Each selection followed by 20-item comprehension test. **Reading Progress Folder** used by students to record rate and comprehension scores.

Difficulty levels — Book 1: Gr. 5 - 7; Book 2: Gr.

7 - 9; Book 3: Gr. 9 - 11.

Price: $1.84 per book; $1.09 per pkg. of 20 **Reading Progress Folders.**

Difficulty levels — Gr. 7 - 8.

Price: 76 cents per book.

Wagner, Guy W. and others. **Reader's Digest Reading Skill Builder.** Pleasantville, New York: Reader's Digest Educational Service, Inc., 1949-53.

Two books for each of 4 grade levels. Nineteen to 25 selections in each book, selected and adapted from previous issues of **Reader's Digest.** Each selection may be used for rate training and is followed by various types of comprehension and vocabulary exercises.

Difficulty levels — Gr. 3, 4, 5, and 6.

Price: 56 cents per copy.

Works, Austin M. **Vocabulary Building Series.** Cambridge, Massachusetts: Manter Hall School, 1951-52.

Three vocabulary workbooks which utilize a number of different types of exercises to stimulate interest in, and develop use of, words.

Difficulty levels — Gr. 8 - 9, 10 - 11, and 12.

Price: $1.00 per workbook.

Stone, Clarence R. and Grover, Charles. **Practice Readers.** St. Louis, Missouri: Webster Publishing Company, 1949.

Four books, one of each of four levels. Books 3 and 4 might be profitably used with some retarded readers. Each book consists of nine units, with nine exercises in each unit. Each exercise consists of a one-page selection, with informational type content, with six questions following the selection. Questions involve the following types of skills: direct details (found only in Books 1, 2, and 3), implied details, meaning of the whole, correctness of a statement in relation to selection, meaning of reference words (e.g., they, who, it), perception of truth or falseness of statements, selection of words similar in meaning (found only in Book 4).

Difficulty levels — Book 3: Gr. 5 - 6; Book 4: Gr. 6 - 8.

Price: 60 cents per book.

Strang, Ruth. **Study Type of Reading Exercises** (for Secondary Schools). New York: Bureau of Publications, Teachers College, Columbia University.

Twenty selections, each discussing or explaining some phase of reading process or habits. Each selection followed by exercises for various types of reading skills.

Difficulty level — High school.

Price: 55 cents per copy.

Thomas, Lydia A. (ed.). **Secrets of Successful Living**. Pleasantville, New York: Reader's Digest Educational Service, Inc., 1955.

Six books, one through six, each containing approximately 25 condensed and adapted articles from past issues of **Reader's Digest**. Questions for stimulating discussion, vocabulary activities, and other activities suggested after each article.

TECHNIQUES AND PROCEDURES
IN
GOVERNMENT READING PROGRAMS

R. Lawrence Dowell
Fort Lesley J. McNair

Introduction

The twenty-three existent reading improvement laboratories located in government agencies in the metropolitan area of Washington offer programs which are, basically, developmental in nature and which, for the most part, seek to meet the situational needs of participants. Only two of the laboratories offer programs of remedial instruction.

Since speed reading courses, which achieved considerable popularity not too long ago, would meet the needs of only a negligible number of the participants in government laboratories, the courses which are offered include a variety of curricula tailored to meet individual and job specifications, and each curriculum is accomplished by pertinent instructional materials, aids and methodology.

The following paper is concerned with a survey of the 23 reading improvement laboratories which currently exist in government agencies in the Washington area, their origin, objectives, organization, staffs, facilities and equipment, curricula, materials, aids, methodology, techniques and procedures. The data for this survey were attained by personal contract with staff members of each of the laboratories and supplemented by visits to many of them.

It can be said that the reading improvement programs in government agencies, i.e. those located in the metropolitan Washington area, have, as their genesis, the Air Force Reading Laboratory which was installed in the Pentagon in 1949. Various government agencies sought and were granted permission to send personnel to the Pentagon Air Force Laboratory, and the resultant interest in reading improvement programs which stemmed from this participation can be evidenced in the rapid expansion of reading programs in these same government agencies.

The original Pentagon Air Force Laboratory, was largely mechanical in nature, both in techniques and procedures used. The program consisted of sessions of a one-half hour practice period on the reading rate controller and a one-half hour practice period on the T-scope. The latter half hour was occassionally interrupted for Harvard and Iowa films and for testing. In addition, the ophthalmograph was used as a diagnostic technique.

Some of the government agencies, whose personnel had experienced the above reading program, sought to establish programs of their own, and with the assistance and encouragement of Major Goodwin and Miss Mahoney, directors of the Pentagon Laboratory in the earlier days, and more recently Mr. Ed Fulker, present director of the Air Force Laboratory, this objective was attained.

The reading improvement laboratories existent in government agencies in the Washington area may be said to be, for the most part, in the embryonic stage — a statement which may be made of many reading improvement programs both in educational institutions and in industry. However, considerable progress can be noted in government reading programs, since their inception, and stems, primarily, from the increased availability of literature on reading improvement, the fine cooperation of educational institutions in making known and available results of research conducted in their own programs and by their own personnel, as well as familiarity with reading problems acquired by program directors and instructors in their own laboratories and from fellow program directors or instructors.

For the most part, these laboratory staff members are alert to useful information, materials, aids, techniques, equipment, and ideas whenever and wherever they may appear, and their willingness to experiment, to study, and to share what they have attained as individuals or in groups has found expression in the creation of the Reading Improvement Laboratory Group. The latter consists of staff members of the 23 government reading improvement laboratories and is the most encouraging and promising single factor evidenced in the survey of these laboratories in preparation for this paper.

Government reading improvement laboratories have developed methodology of instruction in terms of situational factors found in the indigenous agencies. The course outline of the Pentagon Air Force Reading Improvement Laboratory has been used as the basis upon which the instructional techniques have been built. Miss Eva Mahoney, at the time that she was director of the Pentagon Reading Improvement Laboratory, encouraged those who were initiating reading programs to use materials and instructional methods based upon the nature of the agency in which each was located, as well as the course population. Specifically, she discouraged any attempts at duplication of materials and methodology used in the Pentagon Laboratory.

The reading improvement laboratory in any government agency generally falls under one of two branches of the agency's organization — under the training division, which is a subsidiary of the civilian personnel branch of the agency, or under the education division of the agency. This is a logical arrangement for, in government service, these two branches or divisions are vitally concerned with personnel growth and development and with programs designed to attain this end.

The primary objectives of all the government reading improvement laboratories are basically the same; i.e., they are concerned with the improvement of reading efficiency and flexibility of government personnel. There is a difference, however, in the interpretation of **reading efficiency**. For some, this means reading with visual acuity, as well as an adequate comprehension of factual data gleaned from the reading materials. For others, it denotes an automatic application of appropriate situational techniques by the individual to meet his on-the-job reading needs.

The classes in the government reading improvement laboratories are populated with personnel varying from GS-3 clerk-typists to Presidental appointees, from engineers and junior executives to IBM operators. Almost all of the agencies polled, however, had certain limitations on personnel participation with a majority stressing key civilian and military personnel. In the main, participats volunteer and receive approval from their supervisors. In a few cases, the population is captive, and this latter groupe is used primarily for pilot and experimental purposes.

Classes range in size from six to twenty-six per hour, and the number of classes, per day, range from two to six. Ninety-five per cent of the reading improvement laboratories have thirty hours of instruction — one hour a day, five days a week for six weeks. This thirty-hour course can be broken down, even further, to twenty-five hours of instruction and five hours of diagnostic testing. The number of students handled per year in various laboratories range from ninety-six to 700. The size of the staffs in the twenty-three laboratories range from one part-time to five full-time members. Sixty per cent of the laboratories reported operate on a part-time basis, with the person, serving as the instructor, generally serving for the remainder of the work day in some other phase of the training or education program, as the case may be.

The amount of training in reading of staff personnel varies from none, except that acquired from experience in conducting a laboratory, to a Ph. D. in reading. Laboratory facilities vary from one room used as a seminar or conference room at other times, to very elaborate suite arrangements consisting of offices, counselling rooms, two laboratory rooms, and a projection room. Even in one room, however, the student groups are divided into two sections — one using reading rate controllers and the other using tachitrons or T-scopes.

The equipment found in the laboratories is as follows:

Ophthalmograph, or use thereof	60 percent
Telebinocular, or use thereof	90 percent
Reading Rate Controller or Shadow-Scope	100 percent
Tachitron or T-Scope	90 percent
Educational Developmental Laboratory Inc. Controlled Reader	20 percent
Perceptual Developmental Laboratory Machine	15 percent
Harvard Films	20 percent
Iowa Films	15 percent

Tape or Wire Recorders	10 percent

Work books are used in ninety-five percent of the laboratories, as follows:

Brown's **Efficient Reading** (red or blue, or both)	90 percent
Air Force Reading Improvement Manual	5 percent
Cosper and Griffin's **Toward Better Reading**	10 percent
Judson & Baldridge's **Techniques of Reading**	10 percent
Baker's **Reading Skills**	30 percent
Spache & Berg's **The Art of Efficient Reading**	10 percent
Leedy's **Reading Improvement for Adults**	10 percent

In addition to the above, libraries found in the laboratories range in size and completeness from one which contains all of the current publications to one which contains only one of the above-listed workbooks.

In 70% of the laboratories, the basic scope and sequence of any one curriculum are the scope and sequence of the work book used, with supplementary material developed by the individual laboratories. In the remaining 30% of the reading laboratories, work books are used on an individual **a priori** basis. In 85% of the laboratories, the methodology presented in the Spache-Berg book is used with some variation in each case, the latter determined by the individual needs of the students and accompanied by materials developed from agency files and library — rather than from any given work book or text book. The widespread use of Brown's **Efficient Reading** may be attributed to the extreme familiarity with the book experienced by laboratory staff members, many of whom know it as one of their earliest contacts with reading improvement materials.

Reading materials found in the laboratories include, for the most part, fiction, nonfiction, biography, autobiography, and text books. In 15% of the laboratories the use of newspapers, magazines, and books of poetry and drama are found. In 70% of the laboratories regulations, directives, and agency memoranda and letters are used.

In only 20% of the laboratories is vocabulary development included as a part of the course. Sixty percent of the laboratories did not even mention it. In 10% of the laboratories students are encouraged to develop their vocabulary outside of class, and Norman Lewis' **Word Power Made Easy** is the book generally recommended for this individual study. However, the latter is done without direction, evaluation, or control on the part of the laboratory staff. In 15% of the laboratories reporting, the use of prefixes and suffixes and word families are stressed.

All 23 of the reading laboratories use self-checking procedures, and all of them use instruments or machines as listed above. In 60% of the reading laboratories the procedures used are as follows: one-half hour per class for performance on the reading pacers; approximately ten minutes on T-scope practice and the remaining 20 minutes given to instruction by films or lectures or both and exercises and drills. Group methods are generally used for this instruction. Procedures used by the remaining 40% of the laboratories vary from the above in some respects — but the differences are minor.

The preliminary and final testing found in the government reading laboratories can be delineated as follows: 40% use the Ophthalmograph; 90% use the Telebinocular (one including the Manas Battery); and 30% use articles from Brown's **Efficient Reading**. The remaining 40% use one or more of the following materials for testing: The Cooperative Reading Test, The Perceptual Developmental Laboratory Tests, Reader's Digest materials, the **Air Force Reading Manual**, selections from Cosper and Griffin's **Toward Better Reading**, the Iowa Silent Reading Test, and agency-prepared tests (locally standardized).

Vocabulary tests are used by 60% of the twenty-three laboratories. One of the laboratories performed a study to determine the correlation between the Nelson-Denny Test and the Cooperative Reading Test (in so far as its student population was concerned), and finding a high correlation, this laboratory discontinued the use of the Nelson-Denny Test. One laboratory uses the "One Hundred and Eleven

Words," based upon Thorndike's "Ten Thousand," and two laboratories use vocabulary tests based upon Funk and Lewis's book.

Some diagnostic testing of personality, aptitudes, interests, and achievement is available to the students of at least one laboratory and is used for counselling purposes.

Comprehension and skill tests are administered throughout the course to evaluate the student's understanding of and flexibility in the use of the many techniques he has been taught and with which he has had practice. Reading techniques to be applied in the everyday situations encountered by him or his group are included in the curriculum concerned, and flexibility in the appropriate use of these techniques is a primary goal as the student learns how to read periodicals, directives, memoranda, fiction, nonfiction, text books, research materials, and the like, or as in the case of special groups, he learns how to read and transpose numbers, transcribe shorthand, interpret data, etc.

The curricula, materials, and methodology used in some of the laboratories are designed in recognition of the basic principle of individual differences, in addition to a recognition of the various and changing demands of job situations. Provision is made to meet the need for individual adjustment to the latter, with a stress on reading comprehension which, in itself, can increase efficiency on the job and contribute to personal growth.

The techniques used by the government reading laboratories have been developed and adapted to meet specific job situations in specific agencies. They are used, primarily, to decrease the time factor in the participant's assimilation of necessary information from directives, reports and regulations, in addition to offering him opportunities to realize his good intentions to stay abreast of new management, technical, and marketing developments. Secondarily, they are used as incentive motivators for him whereby he may seek and read in other and allied fields and sometimes, even to introduce him to literature in his own field of interest of which he had no knowledge — thus making him conscious of the wealth of creative material to be gained by five or ten minutes with a periodical or other publication. Tertiarily, they enable him to learn how to apply the principles which he has acquired in descriminatory reading to speaking, listening, and especially writing.

To illustrate the latter point, an employee who has become skilled in the application of reading techniques and has been trained in time and effort economy, brevity of expression, conciseness, the condensation and the amplification of ideas, the selection of ideas and facts, and the like, may well make application of the above in oral and written communication and further increase his efficiency as a worker.

Some of the reading laboratories found three major areas in which potential savings in time can be identified. The principle goals are as follows: 1. To improve the development of requirements by going into the area from which the group or key executive is to come, analyzing the job requirements and needs, discussing with the supervisor the resultants desired, and gathering pertinent materials used by the prospective student. 2. To strengthen the role of the techniques, methods and curricula to fit the spacific case. 3. To streamline the processes and procedures in order to achieve a maximum amount of drill, exercise, testing, and evaluation.

The student in his counselling sessions is made aware of this procedure, and in several instances, it has been noted by staff members that he applies the latter to his own work habits. Since management has found that the time preceding the establishment of a formal requirement and reaching the point of decision to go ahead consumes one-third to one-half the total time involved in acquiring any goal, this is apparently the time when decisions tend to be delayed because full information on the vital factors is lacking. Therefore, some of the laboratories seek to enable the group or individual to shorten the time between concept and inventory.

One of the most fruitful areas in which the executive may improve his own operation lies in more efficient planning and control of the time he spends in actual administration. One frequently hears: "Time is money," and nothing could be more true. In an attempt to stress this idea, some of the laboratories offer it in the reading and testing materials. Problems presented may be reflected by the following:

1. Section head calls five members of his organization into a meeting. Cost for six people $50,000 per year at $25.00 per hour. Since meeting had no preplanned time-table, it kills whole afternoon although one hour would have been sufficient. Result: $75.00 wasted in straight time loss alone.

2. An employee makes a practice of coming to the head of his organization with half-thought-through problems. The top man's salary is $20,000 per year, or $10 per hour. Because the subordinate brings in problems instead of alternate solutions from which the executive could make a selection, two hours are lost per week in needless discussions, or 100 hours a year, or $1,000.

3. The head of a section is very demanding about having his employees "come when he calls." Once they get there he receives extraneous telephone calls, and sometimes even keeps employees waiting while he concludes a previous discussion. In the course of a day, he generally uses one hour of such an employee's time. Figuring the latter at $2.00 per hour, $40 or $50 a month are wasted.

Why do intelligent executives in government and industry do these things? Because time is an intangible.

You are all familiar with the method under the term SQR3. Some of the government laboratories not only include it in the instruction but also create interest in the method, itself, because of its applicability to the situations which the executive may encounter.

Dr. Oscar Causey of Texas Christian University commented at the Southwest Reading Conference two years ago that he could teach reading if he only had a clock and materials. We feel that Dr. Causey could also give a very good side course in better management principles at the same time. Furthermore, we are confident that the latter, if it were measured a year later, would result in 100% retention.

As is the case in learning situations where respect for the individual — his abilities, aptitudes, attainments, deficiencies, problems, and interests — is a basic point of departure for all activity, serious consideration is given to the guidance and counselling of the individual in the reading laboratories. Personal data on the student, as well as his daily performance entries and test results, are supplemented and systematically referred to by the counsellor, instructor, or director (as the case may be), and interpretation of progress, lack of progress, trends or tendencies is based upon this information.

Counselling sessions with individuals are scheduled by 40 per cent of the laboratories, and encouragement is given to students to seek additional sessions should they feel the need. Test results — initial, periodic and final — are used to supplement information attained by the personal inventory of the student, his progress record — maintained daily in the laboratory — counselling sessions, as well as observation of behavior and performance by staff members.

In all of the laboratories folders are maintained to contain cumulative data on individual students, and reference is made to these folders during the course and later for follow up purposes, as well as statistical tabulation for reports, program or curriculum evaluation, and special studies.

Follow-up procedures are used as a service to personnel who have completed a course in the laboratory (Generally after 6 months, 1 year, or 2 years) with an opportunity for renewed participation and as a means of evaluating various aspects of the program. Although individual guidance, with a stress on counselling, is a primary concern in most of the government laboratories, considerable attention is given to the use of group guidance techniques whenever the latter can appropriately be applied. This is particularly evident in courses designed for special groups — junior executives, IBM operators, stenographers, research analysts, etc.

The nature of the instruction, materials, and problems encountered by the student in some of the reading laboratories makes possible an immediate application of the techniques he has learned to his job situation.

In addition to instruction and training in reading techniques, the student in one of these laboratories is taught the various listening techniques designed to make him more effective in his various roles as an audience in lectures, conferences, discussions, instruction, conversation, etc. This is achieved by the use of a wire recorder on which have been taped speeches in the parlance of the group (of which the individual is a member) with variations of voices from a monotone to a well-modulated elocution expert, as well as variations of dramatic situations and themes to include personnel interviews, conferences, oral reporting, giving of directions, etc.

In summation, it may be said that the similarity of the majority of the government reading laboratories in the Washington area may be attributed largely to three factors: origin, habitat, and influences. (1) the almost identical beginnings of these laboratories; (2) the fact that their staff members are working under analogous situations; (3) the similarity of experiences and influences, in recent years, of staff members in their attempts to broaden their professional backgrounds. However it may also be noted that there is considerable evidence of variation in these laboratories indicating originality in approach to techniques, procedures, and materials, as well as a recognition of the needs of the respective agencies concerned.

The government reading improvement laboratories owe no small debt to this very group from whom they have received many ideas, reports of research, as well as encouragement and stimulation to continue their work. It is the hope of the staff members of these laboratories that, in the not too distant future, they may make some small contribution to the field of reading and that they will have the pleasure of sharing it with this group.

A READING IMPROVEMENT PROGRAM IN INDUSTRY

Harry O. Patterson
General Motors Institute

Developmental reading training is a relatively new area in executive development. The need for this kind of training has become increasingly obvious because of the mass of reading now required of executives. The burden of reading is not necessarily confined to top-level executives. The complaint is frequently heard from foremen and supervisory personnel that they also have too much reading to do. An example of this was brought to the attention of the author recently during a visit to one of the Divisions of General Motors Corporation. One of the departments in this Division employs more than a hundred engineers, many of whom have supervisory status. In order to read all of the periodicals and journals that come to them, they distribute this reading material among five or six of their group, each being responsible for one periodical. The periodical is read thoroughly by the designated men who then indicate what they believe to be the most worthwhile articles for the others to read. This preliminary reading responsibility is delegated to a different group each month. This is certainly not a unique method; its practice is common in industry. Other men, if they are fortunate enough to have their own secretaries, will delegate this task to them. There are undoubtedly other ways of circumventing this problem, and no doubt variations of the two ways described.

The engineer-executive is just one of many groups who find it necessary to read a great amount of material in order to keep up with their ever-expanding fields. Management personnel in all areas are faced with an increasing number of complex problems requiring knowledge that can be gained only through the reading process. The executive will be handicapped in the effective performance of his tasks if he has ineffective reading habits such as a slow reading rate, inadequate vocabulary, or a lack of higher level reading skills in comprehension.

Preliminary Investigations

For several years some of the Divisions of General Motors have been interested in increasing the effectiveness of their managerial, staff, and supervisory personnel through reading improvement training. Among these Divisions was the A. C. Spark Plug Division of Flint, Michigan. Early in 1952 this Division requested that General Motors Institute, the central training facility of the General Motors Corporation, develop a training program aimed at increasing the reading efficiency of its supervisory personnel. Included were staff heads, superintendents and general foremen. At the time the request was made, most of the research in the field of reading had been accomplished with college freshmen. Very little had been done to investigate adult reading training. An extensive investigation of existing reading programs in colleges and universities, in the Armed Forces, and in industry was initiated. A review of research was made and recognized authorities in the field were consulted. In August, 1952 a tentative plan based on this preliminary survey was presented to a committee composed of personnel from several interested Divisions, Central Office staff, and from General Motors Institute. This committee recommended that an experimental approach be taken in the initial stages to determine the type of training program most effective in the industrial situation. In view of the conflicting theories concerning methods of training in reading, several methods of training were tried under experimental conditions. However, in order to overcome technical difficulties and to test the appropriateness of different materials, a pilot group of General Motors Institute personnel took the first training program. This proved to be invaluable to the trainer in developing methods of presentation and application of techniques. From the pilot group evolved one of the principle guides in the General Motors Reading Improvement Program — the need for treating individual reading problems with individual techniques.

Reading materials applicable to the interest patterns of industrial executives were used in the pilot group. They included exercises to improve eye movements, reading rate, comprehension, vocabulary, evaluative reading, and speed of comprehension. As a supplement, current issues of the educational editions of the **Readers Digest** and the **Atlantic Monthly** were used. Various pieces of mechanical equipment were introduced from time to time. This equipment included a group tashistiscope and an individual tachistiscope, the Harvard Films, and reading accelerators.

The Experimental Program

The experimental program was put into operation at A. C. Spark Plug Division in February, 1953. Forty two volunteers were divided into three groups of fourteen men each. Each individual was chosen by an equating process based on reading rate, comprehension, and index; vocabulary, verbal intelligence, total mental alertness, and age. There were no statistically significant differences between the groups in these factors.

Three methods of training were then put into operation:

Method A — Made use of group and individual mechanical equipment, i.e., reading accelerators, Keystone Tachistiscope, individual tachistiscope, and Harvard Films.

Method B — Made use of group mechanical equipment only, i.e., Keystone Tachistiscope and Harvard Films.

Method C — Used no mechanical equipment. The training sessions consisted of lectures and discussion of concepts, and of practice on individual reading exercises.

All groups were allowed to practice on materials of their choice and were responsible for bringing the material to each training session. Additional material was made available to the trainees in the form of the educational editions of the **Readers Digest** and the **Atlantic Monthly**, publications of the General Motors Information Rack Service, and A. C. Spark Plug Division's **Supervisor's Manual**. The average training time for each group was eleven and a half hours. Sessions were held once a week for approximately two hours.

A battery of tests consisting of the Diagnostic Reading Test Survey Section, Form A, the Thurstone Mental Alertness Test, the Thurstone Temperament Survey, a survey of reading required at work, and a survey of leisure-time reading were given at the start of the program. The results of the tests were made known to each man in an interview before the training began. The interviews enabled the trainer to become better acquainted with each man and to learn something of each man's reading likes, dislikes, and problems. At the end of the program each trainee was given an alternate form of the Diagnostic Reading Test Survey Section and another individual interview was held for an evaluation of the program.

In addition to the three groups mentioned above, a fourth group which will be called Method D was given the Diagnostic Reading Test Survey Section Form A at the same time the other three groups were tested. However, this group received no training in reading improvement, and served as the control group. Eight months after the training had been completed, all four groups were tested using the Diagnostic Reading Test Survey Section, Form B. The results of each method prior to training, immediately after training, and eight months after training are shown in Table 1.

Table I
Mean Reading Test Scores For Each Method
Prior To Training, Immediately After Training,
And Eight Months After Training

Mean Reading Test Scores for Method A

	Before Training	After Training	Eight Months After Training
Rate (w.p.m.)	262.9	458.5	437.1
Comprehension (%)	69.3	82.5	81.4
Reading Index	185.9	381.7	357.7
Vocabulary	38	—	42.9

Mean Reading Test Scores for Method B

	Before Training	After Training	Eight Months After Training
Rate (w.p.m.)	255.4	457.0	439.2
Comprehension (%)	69.6	83.9	82.5
Reading Index	180.0	389.3	362.3
Vocabulary	42.2	—	44.1

Mean Reading Test Scores for Method C

	Before Training	After Training	Eight Months After Training
Rate (w.p.m.)	268.2	486.1	488.1
Comprehension (%)	68.6	81.4	79.6
Reading Index	186.1	398.0	392.6
Vocabulary	40.1	—	42.3

Mean Reading Test Scores for Method D

	Before Training	After Training	Eight Months After Training
Rate (w.p.m.)	268.2	—	256.7
Comprehension (%)	67.1	—	69.3
Reading Index	184.8	—	183.5
Vocabulary	37.1	—	34.2

The greatest retention occurred with Method C, the no equipment group. However, there are no statistically significant differences in the gains made between the three groups. In view of these results it appears that the cost of equipment need not be a significant factor in the consideration of a reading program. In subsequent programs in other Divisions of General Motors equipment has been used occasionally to motivate a group or to demonstrate what is available for use.

Program Phases

Throughout the program at the A. C. Spark Plug Division and in all subsequent programs there has been a basic pattern. This pattern consists of four phases:

1. Testing
2. Individual Interview
3. Training
4. Evaluation and Follow-up

The testing phase of the program serves to establish a basis from which to begin training. As described earlier, this phase includes the administration of a form of the Diagnostic Reading Test Survey Section, the Thurston Mental Alertness Test, the Thurston Temperament Survey, and two reading interest surveys. One of these asks the individual to list the kinds of reading, and the per cent of his time spent on each type of reading on-the-job. The other survey is an attempt to find out what kind of reading is done in leisure time. Two and a half hours is allotted for testing.

The individual interview phase is to interpret the test scores for each individual. It also provides an excellent opportunity for the trainer to discuss individual reading problems, to give information regarding the program, to assess the motivation of the person, and to establish an informal personal relationship with each participant.

The training phase in the original program at the A. C. Spark Plug Division was designed to consist of eight two hour sessions once a week. More frequent sessions would have been desirable, but the operating schedules of the conferees prevented more frequent meetings. Whenever possible, in subsequent programs, two one and a quarter hour sessions each week have been scheduled. The number of sessions have also increased from eight to twelve or more. The nature of the group, the degree of progress shown, and the plant situation, are used in determining the length of the program. The first two sessions are devoted to a discussion of the principles of efficient reading. The film **Speeding Your Reading** is shown during one of these sessions. Supervised practice is a major feature of the remaining sessions. A typical practice session might be as follows:

1. Discussion of a phase of reading such as comprehension or vocabulary
2. Administration of two or three Eye Movement Exercises
3. Reading one or two reprint articles and the answering of the accompanying comprehension checks
4. Discussion of the material read and a reading problem that may arise

The trainer is always on the alert for preblems encountered by individual conferees during the training phase. Some equipment is available through General Motors Institute if a trainer feels that a particular piece of mechanical equipment would be of help in an individual conferee's reading problem. A trainer in any Division of the Corporation is welcome to request any of this equipment that he feels might aid an individual in the program. Since this is a skill-building program, the size of the training groups is limited to twelve persons. This enables the trainer to remain in a close relationship with each trainee, and to interview trainees when necessary during the course of the program.

The evaluation and follow-up phase is an attempt to maintain the highest possible standards for the program. This calls for an evaluation of trainee progress midway in the program and at the end of the program, and, if possible, some months after training is completed. An alternate form of the Diagnostic Reading Test Survey Section is used for each evaluation. The evaluation made at the half-way point of the program is frequently used to determine how much longer the program is to be contained for a particular group. This evaluation, therefore, might occur closer to the end of the program than at the half-way mark. Again, this is partly determined by the individual situation in each plant.

Other Programs

Following the A. C. Spark Plug Division's experimental program, several other Divisions asked for and received reading training on an experimental basis. Up to the summer of 1954 approximately one hundred and fifty executives were trained. During that time and since, a close research control has been maintained by members of the Psychology Section at General Motors Institute known as the Reading Improvement Program Committee. It is the firm belief of this committee that the reading program is a dynamic one and should be flexible and subject to revision whenever such a need is shown. This need for a change first began to be apparent in the spring of 1954. Enough data had been accumulated to show that new material was necessary and a new manual of practice exercises was needed in order to meet the requirements of the industrial executive. Continuing revisions and additions are constantly being made.

Up to the present time, the General Motors Reading Improvement Program has been given to approximately five hundred executives. We have learned that the average executive in General Motors starts the program reading at a rate of 280 words per minute. The measured comprehension is about 72 per cent, and the reading efficiency index is about

191. At the end of training there has been an average gain in index of 87 per cent. The average results of one hundred ten of these men are as shown in Table 2.

Table II

Results Of 110 Executives Trained In The General Motors Reading Improvement Program

	Before Training	After Training
Rate (w.p.m.)	280	447
Comprehension (%)	73.2	83.1
Index	200	374

% gain in Index — 87.4%

Thirteen Divisions of General Motors Corporation have participated in the program. One Division is presently having the program presented to them for the second time, and there is a waiting list of over three hundred men in this same Division who wish to have reading training.

Programs, such as the Reading Improvement Program, are administered and presented in many Divisions of the Corporation by members of the Plant Management Training Department of General Motors Institute. This department specializes in the training of management personnel in the plants, because it is not possible nor practical to send large numbers of such men to General Motors Institute for training. So that reading training may be made available to the Divisions, an arrangement has been made with this department to instruct conference leaders in the theory and techniques of the Reading Improvement Program. This training is offered periodically to members of the Plant Management Training Department working in Divisions which have expressed an interest in the reading program. An attempt is usually made to train these persons during the summer months in groups of five or six. Occasionally, however, it is necessary to train an individual because a particular plant or Division has decided that its executives should have reading training. In either case, these conference leaders are given three and a half to four days of intensive training at General Motors Institute. A typical schedule of this training is as follows:

First Day

1. Orientation
2. Administration of tests
3. Nature of the Reading Process

Second Day

1. Discussion of the principles of learning
2. Discussion of test results
3. Introduction to the General Motors Reading Improvement Manual
4. Introduction to the Leader's Manual
5. Introduction to the educational editions of the **Readers Digest** and **Atlantic Monthly**, the Reading Ease Calculator, **30 Days to a More Powerful Vocabulary**, and other material
6. Discussion of training sessions

Third Day

1. Discussion of the interviews
2. Discussion and demonstration of the mechanical equipment
3. Viewing and discussion of the film **Speeding Your Reading**

Fourth Day

1. Discussion of program organization
2. Discussion of the reporting of weekly results
3. Discussion of the possible contributions of the leader
4. Discussion of the general conduct of the sessions
5. Overall view of the program
6. Question and answer period

The conference leaders attending these sessions may not be called upon for this program for several months, possibly a year or more after attending the training sessions. Then it is necessary for one of the members of the Reading Improvement Program Committee to be present when the program is started in a Division. However, regardless of the length of time since training, a member of the committee is always present at the start of a program to interpret the test results and to aid the conference leader in starting the program. In this way technical supervision and control is maintained.

The materials used by the conference leaders in the field are available through the Supply Department of General Motors Institute. If the leader decides that it is necessary or desirable to use any of the equipment with which he became familiar during his training program, a request to the Institute will be filled on the same day the request arrives. The leader is responsible for obtaining any film he might wish to use through the nearest film rental agency. For additional reading material it is usually suggested that a three months subscription for the educational edition of the **Readers Digest** be obtained.

The program has been well received in all the Divisions in which it has been given. Some Divisions have had several groups of men trained and others have indicated a desire to start such training in the near future.

The other groups to receive this training are General Motors Institute students in the Cooperative Engineering, Business Administration, and Dealer programs. It is believed that the training of these students is a very important adjunct of the training received at the Institute and has a direct bearing on the reading training presented to industrial executives. To date there have been 514 of these students trained in the reading program since its inception in 1953. These students are four-year Engineering and Business Administration students and two-year Dealer students who spend part of the school year in a plant or dealership and part at the Institute. The results of a typical group of these students is shown in Table 3.

Table III

Reading Improvement Program Results For Cooperative Students For The Second Semester — 1955 *

	Before Training	After Training
Rate (w.p.m.)	264	472
Comprehension (%)	79.6	83.6
Reading Index	204	381

% gain in Index — 86.7%

* Results for 150 students

The per cent gain in Index has varied somewhat from one semester to another but the average gain is about 75%.

This is a voluntary, non-credit program that meets for two one-hour sessions each week for one semester. Some changes have been made in the student program because of the cooperative nature of their program as well as the specific needs of these students in terms of textbook reading and the formation of proper study habits. The last month of the semester is spent on a discussion of efficient study techniques as well as practice in reading. There are eight to ten groups scheduled for each week in an effort to reach the largest possible number of students. There are nine groups scheduled during the current semester with a total enrollment of 148. On the basis of past experience it is estimated that approximately one-fourth of these students will drop out for various reasons. The primary reason for dropping out of the program is the need to spend more time on other subjects. This need is easily recognized when it is realized that the weekly load for these students is from thirty-one to thirty-six hours. An attempt is made to schedule the meetings so that more second semester Freshmen students are able to enroll. Preference is given to these Freshmen but Sophomores, Juniors, and Seniors are welcome in the program. The only restriction placed on the cooperative student program is the size of each group — which is limited to sixteen. The program has been warmly received by those students who have participated in it, and some Divisions are now asking that all of their first semester Freshmen take the program if it can be worked into their schedules.

Another facet of reading training that has a direct effect on industry in the Flint, Michigan, area is offered in the Spare Time Program at General Motors Institute. The Spare Time Program is an adult education program offered to any adult in the Flint area. Many employees of the Division of General Motors located in the vicinity take a wide variety of subjects that will benefit them in their present jobs and prepare them for better positions in the future. The Spare Time phase of the reading program has been in operation since the spring of 1955. The class meets once a week for two hours over a twelve week period. Approximately 75 persons have taken the program to date. This is a continuing program and it is the plan to offer it until there is no longer a demand for it. It is felt that the demand will increase rather than decrease in the next few years.

One other program that should be mentioned briefly is the Reading Improvement Program offered to faculty and staff members of General Motors Institute. This is the newest phase of the reading program and is one that is expected to grow in the future. At the present time the author has two groups with a total enrollment of twelve persons. In view of the heavy teaching load of many of the faculty members, this is felt to be a good response to the program. A group of eleven faculty members from one department participated in the program in the spring of 1956. They showed an 83% gain in reading efficiency in an eleven week program. A follow-up eveluation of this group is planned before the first of the year.

Conclusions

One of the members of the Reading Improvement Committee is informally experimenting on a different procedure with his groups of cooperative students. Another member is involved in a project to determine what, if any, changes take place in certain areas measured on the Thurston Temperament Survey due to reading training. The writer presently is assembling material for a reading manual more suited to the needs of engineers and other technical personnel.

In conclusion, it may be said that the General Motors Reading Improvement Program is a growing and dynamic program. As this is being written there are two and possibly three Divisions that plan to start the program soon after the first of the year. We are constantly striving to improve the program through research and experimentation.

Bibliography

Jones, Dan H. "Reading Improvement in Industry Aided by Scientific Program." General Motors Engineering Journal, Volume 2, Number 2, 22-25, 1955.

Jones, Dan H. "An Experimental Study of Three Methods of Training Industrial Executives in Reading Improvement." Unpublished Doctoral Dissertation, Michigan State University, 1956.

RECENT AND CURRENT RESEARCH IN COLLEGE READING

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Directors of college reading programs, heads of departments of psychology and heads of departments of education in all of the state universities and in a hundred and fifty other larger colleges and universities were requested, during the fall semester 1956, to report research recently completed and research in progress on problems relating directly or indirectly to improvement of reading in college. Research listed below was reported.

Research In Progress

Amato, Anthony J., Pennsylvania State University. "Effect of Bibliotherapy on Young Adults in Their Adjust ment to Everyday Problems." Population: Individuals who came to Reading Center for help, college students who regularly report for regular group work in reading and study habits, and students in one class of the teacher-training sequence. Completion date, Summer, 1957.

Anderson, Dr. G. V., and Dotson, Dr. Elsie, University of Texas. "Rigidity and Reading Improvement" All freshmen entering the Reading Improvement Program were given a reading test from the area of fiction and one in the area of history, several scales from H. G. Gough's California Personality Inventory were administered, the group Rorschach and the College Ability Test were administered. Various relationships among these test scores and reading improvement will be explored. Completion date, Fall, 1957.

Bliesmor, Emory P., and Dotson, Elsie J., University of Texas. "Comparability of Various Forms of the Diagnostic Reading Tests." A study of comparability of Forms A and H, of Forms A and G, and of Forms G and H of the Diagnostic Reading Tests (Survey Section). Completion date, February, 1957.

British Columbia Optometric Association members, Office of Provincial Inspector of Schools, Langley, B. C. "The Effect of Certain Optometric Techniques on the Response of Poor Achievers to a Remedial Program." Using control group principle, high school students a year or more retarded in reading ability were given visual performance tests and visual training program to develop perceptual skills of visual space (direction, form, distance, and size). Control and uncontrol groups are then to be given the same remedial reading instruction program. Differences in degree and endurance of improvement will then be analyzed. Initial report, July, 1957, final, July, 1958.

Frederick, Barbara, University of Chicago. "Personality Change Related to Reading Improvement in a University Student-Centered Program of Corrective Reading." The purpose of the study will be to investigate four major questions growing out of Rogers' necessary and sufficient conditions for therapy and secondarily out of Vernon's phenomenological theory of nature of reading. With student-centered teaching do students improve their reading to a statistically significant degree? Do they show personality change to statistically significant degree ? If such changes occur is change in personality positively correlated with reading improvement ? In control groups where conditions are not met will significant reading improvement or significant personality change occur ? To be completed in 1957.

Halfter, Irma T., McCall, Raymond J., and Douglass, Frances, De Paul University. "Commerce Reading Comprehension Test." Under preparation and preliminary validation, this alternate form is a continuing validation study on the first form which is a test attempting to find the commerce student's reading capacity. Alternate form — August, 1957.

Humphrey, Patricia, and Reed, James C., Wayne. State University. "Cutting Scores for College Reading Tests." The problem is to determine what level of reading ability is necessary for success in college. The readability level of certain texts is being determined. The grades of students in the course whose reading level is above the text is being compared with the grade of students whose reading level is below the text. Intelligence is held constant. To be completed March, 1957.

Irvine, Paul, Jr. University of North Carolina. "An Experimental Study of the Effectiveness of Five Methods of Teaching Reading." This experiment utilizes five experimental groups and one control group, each containing sixteen undergraduate college students. A different instructional method was employed with each experimental group. The control group received no instruction. The reading improvement obtained by each group is compared with that obtained by the other experimental groups and the control group. It is hoped that the results will help teachers of reading to evaluate certain methods, materials, and equipment designed to improve reading ability. To be completed August, 1957.

Llewelyn, Mrs. Eva, Alabama Polytechnic Institute. "Relationship Between Reading Ability and Certain Interpersonal and Intrapersonal Relationships in a Group of College Students."

Investigation of responses to the Thermatic Apperception Test, Bell Adjustment Inventory and an especially designed biographical data sheet to determine whether differences exist between students in "high" and "low" reading ability classifications. Completion date, March, 1957.

Ludwis, Martin J., Oregon State College. "An Investigation of Emotional Factors that Influence Reading Problems." Use of word association tests plus follow up interviews with volunteer students from our effective Reading program. Completion date, June, 1958.

Mazurkiewicz, Albert J., Lehigh University. "Relationship Between Certain Reasoning Tests and Reading Comprehension." Reading and reasoning, experimental, population 150 —an attempt to investigate the influence of reasoning in comprehension of reading material. Completion date, June, 1957.

McConihe, Esther J., and Pedersen, Rebecca. Western Reserve University. "Reading Habits Inventory." While we propose to use this inventory with adults, we believe it will be useful for advanced college students as well. We hope to isolate reading habits relating primarily to habits of approach to deriving meaning, then to measure them. Completion date, June, 1957.

Rankin, Earl F. Jr., University of Michigan. "The Cloze Procedure as a Measure of Reading Comprehension." This is a study of the validity and practical utility of a new method of measuring reading comprehension. This instrument is being used to measure several aspects of reading improvement among participants in a college reading program. Completion date, March, 1957.

Robertson, Malcoln H., University of Mississippi. "The Effective Study Course in the Improvement of Reading Speed, Vocabulary, and Comprehension." We are interested in seeing what improvement takes place in reading skills as a result of taking an effective study course. We are interested in the differences in improvement due to instructors and different types of emphases placed on material related to reading and to different approaches employed in this effective study course. To be completed in Spring, 1957.

Roekel, B. H. Van, Michigan State University. "The Relative Consistency of Items Responded to correctly to Total Items Responded to in Pre and Post Testing as Measures of Progress in Reading Improvement Classes." This study involves an analysis of a random sample of several hundred pre and post tests which have been used as measures of progress resulting from training in reading improvement classes at the college. The test used in this study is the Iowa Silent Reading Test. The purpose of the study is to determine specifically what gains in scores on alternate forms of the test, when used as pre and post tests, mean in relation to actual improvement in the reading proficiency of college students. Completion date, February, 1957.

Smith, D. E. P., University of Michigan. "Endocrine Bases of Reading Disability." A field, treatment and factor analythic study including 1000 children (lowest 20% readers, grades 3-9, Ann Arbor Public Schools); 14 individually administered tests (personality, intellect, perceptual vision, hearing, flicker, fusion, etc.); endocrine anomalies to be screened, diagnosed, treated, etc. Factor profiles to determine syndromes, diagnostic tests. Completion date, Summer, 1957.

Smith, Henry P., Kansas University. "Evaluation of Results of General Reading and Study Skills Program." The research will check on various types of gains (test scores, scholastic records, etc.) made by students during past three years and also, will try to determine what kinds of students benefit most. Personality factors will be evaluated. Completion date about July, 1957.

Spache, George D., University of Florida. "The Prediction of Probable Gains in Rate of Reading as a Result of Training." An attempt to construct a battery of prognostic tests which will predict probable gains in rate of reading as a result of group or individual instruction. Completion date, May, 1957.

Stone, David R., and Bagley, Clarence C., Utah State Agricultural College. "A Survey of Elements in the Diagnosis of Reading Ability at the High School and College Level." An inventory of specific skills in the reading process as seen in the tests and manuals now in wide use. Completion date, June, 1957.

Vance, Dr. Merle W., Sacramento State College. "An Emphasis on Spelling During the Time Students Were Enrolled in Reading Improvement." Spelling, using phonetic principles and syllabication in direct teaching. It was first concluded that the great majority of poor readers were also poor in spelling. Since the freshmen enrolled (falling below the 35th percentile in the ACE) were also enrolled in "remedial" English where a proficiency in spelling was a necessity, a type of control was possible; comparing the students enrolled in the reading course with students of the same caliber not enrolled, both being enrolled in remedial English.

Wood, Roger L., University of Michigan. "Prediction and Analysis of Attrition in a University Reading Program." The study is an attempt to discover the personal factors in the students of a non-credit, non-tuition reading program which leads to dropping out without completing the course. From this to devise a prediction instrument. Further, an analysis of what happens within the class is being made to understand factors relating to the phenomenon.

Research Recently Completed But Not Published

Halfter, Irma T., De Paul University. "Commerce Reading Comprehension Test." Continuing validation studies of test with larger and more diversified populations; also with other-than-Commerce population: Underlying contention or thesis: That reading skills are perculiar to the fields of concentration.

Humphry, Kenneth H., Humboldt State College, Arcata, California. "An Investigation of Amount-Limit and Time-Limit Methods of Measuring Rate of Reading." A dissertation submitted in partial fulfillment of requirements for the degree of Doctor of Philosophy, in the College of Education in the Graduate College of the State University of Iowa.

Mann, Helene Davis Powner, Tulane University. "Some Hypotheses on Perceptual and Learning Processes with Their Applications to the Process of Reading." A description of a university program for the improvement of reading, a part of which was to determine the measurable and non-measurable results of 12 group meetings conducted with psychotherapeutic techniques. Results are presented together with the conclusions and some hypotheses on problems related to reading.

Reed, James C., Wayne State University. "Some Effects of Short Term Training in Reading under Conditions of Equated Motivation." Problem is to cut the hypothesis that gains in college reading are a function of degree of motivation rather than treatment effects.

Roth, Dr. Robert M., University of Texas. "The Role of Self Concept in Achievement." A Q sort measuring self concept in 4 areas (self as self, self in relation to authority, self as a student, and self as a Reader) and one form of the survey section of the DRT was administered to each Freshman entering the Reading Improvement Program. The Q Sort was administered, along with an alternate form of the DRT upon completion of the program and various inter-relationships among the Q sort scales and improvement in reading (as measured by the DRT) were studied.

Sharpnack, Harold, University of Wyoming. "A Comparative Study of Two Basic Approaches to the Teaching of Developmental Reading in the Study Skills Center at the University of Wyoming." Use of two experimental and one control group and varied patterns in "recognition" type reading drills as basic introductory materials.

Wall, Claire French, Alabama Polytechnic Institute. "The Relationship Between Certain Variables in Reading Improvement and Academic Grades At the College Level." Through statistical analyses the investigation determined: (1) gains which were made by a group of students in the Reading Improvement Course at Alabama Polytechnic Institute in speed, comprehension, and vocabulary, (2) the relation of such gains as shown by course tests to grade point averages following the reading course, and (3) the significance of the change which occurred in college grades following remedial work for the group of students who took the course as compared with a matched control group.

Research Recently Completed and Published

Gray, William S., and Rogers, Bernic, University of Chicago. "Maturity in Reading: Its Nature and Appraisal." Considers the nature of maturity in reading, develops an instrument for measuring progress toward maturity and presents the results of studies of maturity in reading of four groups.

Bullock, Harrison, Columbia University. "Helping the Non-Reading Pupil in the Secondary School." New York: Bureau of Publications, Teachers College, Columbia University, 1956.

Dever, Imogene, Columbia University. "Positions in the Field of Reading." New York: Bureau of Publications, Teachers College, Columbia University, 1956.

Penty, Ruth C., Columbia University. "Reading Ability and High School Drop-Outs," New York: Bureau of Publications, Teachers College, Columbia University, 1956.

A SURVEY OF READING IMPROVEMENT PROGRAMS IN INDUSTRY

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Reading training programs have become an essential part of management development in many companies throughout the country. This is a relatively new area of training and one that has many controversial aspects. One of the questions faced by a company wanting to give a program in reading training is the expense involved per man hour compared with the resulting benefits. Except in special instances, these benefits are sometimes difficult to determine from a production standpoint. This has, undoubtedly, prevented many interested companies from attempting reading improvement programs. However, this same reasoning could be applied equally well to other areas of training in which the benefits may, perhaps, be more difficult to assess than the benefits accruing from training in reading. A partial measure of the benefits of reading training is possible through the use of standardized reading tests. Other possible assessments of the benefits may be obtained through the faster flow of paper work, more expressed interest in journal articles, and a quicker flow of journals and memoranda through a business organization.

An increasing interest in reading training is shown by the more frequent appearance of articles on this subject in periodicals having an industrial circulation. Further evidence of this interest is increase in reading manuals for adults as well as well as high school and college populations in recent years. Management and training consultants are now offering reading training to all who are interested. Inquiries concerning the General Motors Reading Improvement Program are received from time to time at General Motors Institute.

Despite this interest in reading training, there seems to have been little accomplished in determining how extensively this training is being done. One of the more recent attempts in this direction was a questionnaire developed and distributed by Ralph S. Acker of the Engineering School, Fort

Belvoir, Virginia in 1955. This study is a compilation of the results received from 108 respondents. Of this number, only a little more than half (57.4%) were business organizations. The remainder were either military or governmental agencies. The writer, at the suggestion of Mr. O. S. Causey of Texas Christian University, Fort Worth, Texas, undertook a broader survey of reading programs in industry.

A questionnaire was sent to corporations listed in the July 1956 supplement of **Fortune magazine** entitled **The Fortune Directory of the 500 Largest U. S. Industrial Corporations.** The largest corporations of seventeen arbitrarily determined categories were chosen.

One hundred sixty-five companies were selected. The questionnaire was sent to each company with a covering letter and a self-addressed, stamped envelope. Responses were received from 132 companies. This is a return of approximately 80%. One hundred twenty-six asked that a summary of the results be sent to them.

In the summary of results for each question that follows, the seventeen industries have been reduced to seven more comprehensive categories for the sake of brevity and convenience. The seven industries and the number of companies embraced by each industry are as follows:

- Food Industry:
  - Food Manufacturing and Preparation — 13,
  - Meat Packing — 6.
- Processing Industries:
  - Oil — 15, Rubber — 6, Steel — 10.
- Service Industries:
  - Banking — 10, Insurance — 6, Merchandising — 10.
- Fabricating Industries:
  - Aircraft Manufacturing — 15, Electrical Mfg. — 19,
  - Automotive Manufacturing — 12.
- Transportation Industries:
  - Air Lines — 6, Railroads — 8.
- Chemical Processing Industries:
  - Chemical — 11, Pharmaceutical — 7.
- Soft Goods Industries:
  - Shoes — 3, Textiles — 3.

The following tables summarize the results of the questionnaire using the sequence employed in the questionnaire.

1. Do you have a reading program in operation at this time ?

	Yes	No
Banking, Insurance, Merchandising	4	18
Aircraft, Electrical, Automotive	11	26
Oil, Rubber, Steel	4	24
Food, Meatpacking	5	8
Airline, Railroad	0	13
Chemical, Pharmaceutical	0	12
Textile, Shoe	2	5
TOTAL — 132	26	106

2. Have you had a Reading Improvement Program in the last five years ?

	Yes	No	No. Response
Banking, Insurance, Merchandising	10	12	0
Aircraft, Electrical, Automotive	13	21	3
Oil, Rubber, Steel	11	16	1
Food, Meatpacking	7	5	1
Airline, Railroad	3	10	0
Chemical, Pharmaceutical	5	7	0
Textile, Shoe	3	4	0
TOTAL — 132	52	75	5

3. We have discontinued the Reading Improvement Program because:

Program was run on a pilot basis only	10
We were not satisfied with the program	6
Insufficient interest shown in the program	5
Other training needs have a higher priority	4
Program was run until expressed need was met	3
A change in training staff	1
	29

4. Do you plan to start a Reading Program ?

	Within 1 Year	2 Years	Not Planned	No Response	Total
Banking, Insurance, Merchandising	0	0	16	6	22
Aircraft, Electrical, Automotive	5	0	25	7	37
Oil, Rubber, Steel	6	1	18	3	28
Food, Meatpacking	1	1	6	5	13
Air Line, Railroad	2	1	10	0	13
Chemical, Pharmaceutical	0	2	10	0	13
Textile, Shoe	0	2	5	2	9
Total	14	7	90	23	132

5. If an experienced, successful industrial reading authority were made available to you on a consulting basis, would you consider starting a program ?

	Yes	No	Don't Know	No Response	Total
Banking, Insurance, Merchandising	1	7	8	6	22
Aircraft, Electrical, Automotive	8	18	4	7	37
Oil, Rubber, Steel	5	15	1	7	28
Food, Meatpacking	4	2	1	6	13
Air Line, Railroad	4	5	2	2	13
Chemical, Pharmaceutical	5	4	2	1	12
Textile, Shoe	1	5	0	1	7
Total	28	56	18	30	132

6. What level of employes participate in your program ?

	Hourly Rated	Non-supervisory	Supervisory	Management	No Response
Banking, Insurance, Merchandising	1	4	4	4	9
Aircraft, Electrical, Automotive	1	4	10	10	12
Oil, Rubber, Steel	1	3	8	8	8
Food, Meatpacking	1	2	6	6	0
Air Line, Railroad	0	0	3	0	10
Chemical, Pharmaceutical	0	1	2	3	6
Textile, Shoe	0	0	3	2	2
Total 134	4	14	36	33	47

(The larger total number of responses to this question is the result of two companies responding to more than one category.)

7. What are the enrollment conditions of the sources ?

	Voluntary	Mandatory	Other	No Response
Banking, Insurance, Merchandising	5	2	0	15
Aircraft, Electrical, Automotive	13	2	0	22
Oil, Rubber, Steel	9	1	1	17
Food, Meatpacking	7	0	0	6
Air Line, Railroad	2	0	0	11
Chemical, Pharmaceutical	5	0	0	7
Textile, Shoe	2	0	0	5
Total 132	43	5	1	83

8. What is the length of your program in clock hours ?

Banking, Insurance, Merchandising: Three companies reported courses of 20 hours.

Aircraft, Electrical, Automotive: One company reported 18 hours, three reported 20 hours and five reported 30 hours.

Oil, Rubber, Steel: One reported 15 hours, one reported 18 hours, six reported 20 hours, one reported 25 hours, and three reported 30 hours.

Food, Meatpacking: Six reported 20 hours.

Airlines, Railroads: One reported 20 hours, and one 35 hours.

Chemical Pharmaceutical: One reported 8 hours, two reported 20 hours, one reported 35 hours, and one variable hours.

Textile, Shoe: One reported 35 hours and one 40 hours.

9. Who conducts the program ?

	Consultant	University Specialist	Training Dept.	Other	No Response
Banking, Insurance, Merchandising	1	3	3	1	14
Aircraft, Electrical, Automotive	5	6	6	0	20
Oil, Rubber, Steel	5	2	5	0	16
Food, Meatpacking	3	1	3	0	6
Airline, Railroad	0	1	2	0	10
Chemical, Pharmaceutical	0	3	1	0	8
Textile, Shoe	0	0	2	0	5
Total 132	14	16	22	1	79

10. What kinds of instruction are given ?

	Group	Individual	Both	No Response
Banking, Insurance, Merchandising	4	0	2	16
Aircraft, Electrical, Automotive	6	2	5	24
Oil, Rubber, Steel	8	0	3	17
Food, Meat Packing	3	2	2	6
Airline, Railroad	0	0	2	11
Chemical Pharmaceutical	3	1	1	7
Textile, Shoe	0	0	2	5
Total 132	24	5	17	86

11. What are the objects of your program ?

	Increase Speed Comp. Vocab.	Increase Speed Comp.	Develop Flexibility Adaptability	Other	No Response
Banking, Insurance, Merchandising	3	3	2	2	12
Aircraft, Electrical Automotive	4	7	4	0	22
Oil, Rubber, Steel	6	4	3	1	14
Food, Meatpacking	1	5	0	1	6
Airline, Railroad	0	2	0	0	11
Chemical, Pharmaceutical	2	4	2	0	4
Textile, Shoe	1	2	0	0	4
Total 132	17	27	11	4	73

The four responses to the "Other" category are as follows:

1. To increase speed and comprehension in reading amounts on checks.
2. To increase speed and accuracy of work.
3. To increase recognition span and accuracy of Accounting Department.
4. Point out practice techniques for self-improvement.

12. How many employees have taken the program to date? Approximate numbers of employees were reported as follows:

Banking, Insurance, Merchandising	365
Aircraft, Electrical, Automotive	2335
Oil, Rubber, Steel	730
Food, Meatpacking	780
Airline, Railroad	120
Chemical, Pharmaceutical	200
Textile, Shoe	160
Total	4,690

13. The following equipment is used in our program.

	Pacers	Tachistoscopes	Controller	Other	No Response
Banking, Insurance, Merchandising	3	6	1	2	10
Aircraft, Electrical, Automotive	1	8	4	5	19
Oil, Rubber, Steel	3	5	2	0	18
Food, Meatpacking	2	4	0	1	6
Airline, Railroad	2	1	0	0	10
Chemical, Pharmaceutical	0	3	0	0	9
Textile, Shoe	1	0	1	0	5
Total 132	12	27	8	8	77

14. The following films are used in our program.

	Harvard	Iowa	Other	No Response
Banking, Insurance, Merchandising	0	1	1	20
Aircraft, Electrical Automotive	4	1	1	31
Oil, Rubber, Steel	6	0	1	21
Food, Meatpacking	2	0	0	11
Airline, Railroad	0	0	0	13
Chemical, Pharmaceutical	2	0	0	10
Textile, Shoe	2	0	0	5
Total 132	16	2	3	111

The films listed by respondents in the "Other" category were:

1. University of California 2. Speeding Your Reading
3. Perceptual Development Laboratory

15. We use the following kinds of reading material:

	Reading Workbooks	Practical Reading	Readers Digest	Atlantic Monthly	Other	No Response
Banking, Insurance, Merchandising	3	1	0	1	1	16
Aircraft, Electrical, Automotive	10	2	4	2	1	18
Oil, Rubber, Steel	5	1	0	0	4	18
Food, Meatpacking	4	3	3	0	1	2
Airline, Railroad	1	0	0	0	0	12
Chemical, Pharmaceutical	2	1	2	1	0	6
Textile, Shoe	2	1	2	0	0	2
Total 132	27	9	11	4	7	74

The reading materials listed in the "Other" category are:

1. **Fortune**
2. **Business Week**
3. Exercises developed by instructor
4. Harvard Reading selections
5. **Harvard Business Review**
6. **Harpers Magazine**
7. Foundation for Better Reading selections

16.-19. We use the following vision tests, standard reading tests, intelligence tests, personality inventories.

Vision Tests

Test	Number In Use
Ophthalmograph	2
Orthorater	1
Keystone	1
Physician	1
Employment Tests	1
Total	6

Reading Tests

Test	Number In Use
Coop English	1
Nelson-Denny	3
DRT	8
SRA	3
UCLA	1
Company Tests	1
Robinson-Hall	1
Harvard	4
Shrammel-Gray	1
FBR	1
ACE	2
PDL	1
Dvorak-Van Wagenen	1
Inglis	1
Purdue	1
Iowa	2
Provided by Consultant	1
Mich. speed of reading	1
Total	34

Intelligence Tests

Test	Number In Use
Wonderlic	4
Otis	1
TMA	1
CTMM	1
Those on record	1
Total	8

Personality Inventories

Inventory	Number In Use
Guilford-Zimmerman	1
Johnson	1
TTS	2
Personal Audit	1
Bernreuter	1
Total	6

20. Rank Materials according to effectiveness.

Twenty-one companies, or 28% of the respondents who have or who have had reading training programs answered this question. The results show the following order of effectiveness:

1. Reading Material. 2. Tachistoscope. 3. Pacers and Films. 4. Ophthalmograph.

21. We have obtained the best results from the following types of equipment of reading material.

Type	Number
Reading Selections	10
Films	4
PDL Program	2
Tachistoscopes	2
Readers Digest	1
Pacers	1
Vocabulary Drill	1
No Response	111
Total	132

22. We have made the following changes in our program since its inception:

The responses to this question can be stated for all industrial categories in general statements as follows:

1. We have resumed group instruction.
2. We are making use of more reading material and fewer films.
3. Follow-up studies are being made.
4. Films, other than the Harvard Films, have been added.
5. We are making use of short tests on industrial reading material.
6. More use is being made of individual instruction.
7. Pacers have been added to our program.
8. Less emphasis is being placed on the Tachistiscope.
9. We are placing more emphasis on vocabulary building.
10. Our program has been lengthened.

23. Please comment on the Reading Improvement Program

in your organization, or about Reading Improvement Programs in general:

This request received responses from 85 respondents, (65%). The majority of comments were favorable towards reading programs. A considerable number of favorable comments came from organizations that have no program but where the respondents expressed hope that reading programs would eventually become an integral part of the training in their companies at a future date. The comments in generalized terms are as follows:

1. We have never had a reading program but think they are worthwhile.
2. We have had the program and are pleased with the results.
3. We expect to install a program in the near future.
4. We have had to discontinue our program because of other training needs.
5. We do not have a program but some of our employes are taking a course at a local school.
6. The need for such a program exists but top management is not interested.
7. There is a need for more investigation. At the present time such training is a fad.
8. Although no program is planned we intend to conduct specific research in this area.

Summary and Conclusion

In order to determine the extent of reading improvement programs in certain industries, 165 questionnaires were sent to leading companies in seventeen industries. One hundred thirty-two or 80% of those surveyed returned the questionnaire. All except six of the 132 respondents asked for a summary of the questionnaire results. Seventy-eight companies or 59% of the respondents indicated that they either have programs in operation now or have had programs within the last five years. Most of the comments received from companies with or without programs were favorable to reading programs, and several requested information about the General Motors Reading Improvement Program.

The results of this survey indicate there is a very real interest in reading programs expressed by persons involved in training and personnel development in industry. In some instances this interest extends into the top levels of management. The field of reading training seems to be expanding and reaching more people in various ways. Colleges and universities, management consultants, and industrial training departments can expect to be called upon more frequently to provide this kind of training.

A SURVEY OF READING PROGRAMS IN WISCONSIN

R. Keith Woods
Wisconsin State College

This is a study of the status of college reading improvement programs in institutions offering teacher training in Wisconsin.

The study is concerned with efforts on the part of the college to improve the reading skills of students enrolled in their institutions. During January, 1956, questionnaires were mailed to fifty-one institutions listed in the Wisconsin School Directory for 1955-56.

Returns from schools listed in categories of the directory are:

1. University of Wisconsin	1/1	— 100 %
2. Wisconsin State Colleges	9/10	— 90.0%
3. Private Colleges Training Teachers	17/17	— 100 %
4. County Teachers Colleges	20/23	— 86.9%
All Categories Combined	47/51	— 92.2%

For purposes of this report the University of Wisconsin and the Wisconsin State Colleges will be combined in category I. The private schools training teachers and the county teachers colleges follow as categories II and III respectively.

I. Colleges now offering courses in reading to college students for purposes of self-improvement in reading skills. (Methods courses to prepare elementary and/or secondary teachers to teach in public schools are not included.)

Category I — 4/10 = 40.0%
Category II — 6/17 = 35.3%
Category III — 3/20 = 15.0%
All Categories — 13/17 = 30.2%

All programs are offered normally as courses, clinics, or labs in any area or classification, however, the majority emphasis comes during the freshman year.

Category I — One school provides individualized labs only during the regular and summer sessions. Another offers a course in the combination of psychology of reading and self-improvement of reading skills during the summer sessions only.

Category II — Courses are offered in both the regular and summer sessions in the six schools. One school offers in addition to a second semester lab course an incorporation of a developmental reading program in Freshman English Composition and Rhetoric.

Category III — Note that county colleges limit their preparations to students enrolled in two year courses leading to certificates required for teaching in rural schools. One of the schools, occasionally but not normally, offers the reading course above. Another requires that a course entitled "Rapid Reading" be taken at a local adult vocational school.

Classes are scheduled in the remaining eight schools. Those not included as having special courses indicated above, report this service in:

- Freshman English — 10% of the time allotted to remedial reading for slow readers.
- Remedial English during the freshman year.

No doubt special reading services are included in regular freshman English courses in other schools.

II. Number of schools not offering self-improvement reading courses but which plan to do so in the near future.

Category I — 1/6 = 14.3%
Category II — 2/11 = 18.2%
Category III — 1/17 = 5.6%
All Categories — 4/34 = 11.8%

In all three categories schools recommended the inclusion of the course but stated that the lack of faculty prevented the offering of this service.

III. Number of schools reporting student and faculty demand for the course.

Category I — 1/6 = 16.7%
Category II — 4/11 = 36.4%
Category III — 2/17 = 11.8%
All Categories — 7/34 = 20.6%

Both faculty and student demands were reported in five out of seven schools. Two schools indicated faculty demands.

IV. Number of students enrolled; average class size; hours in course.

Category I	Students	Size	Hrs. in Course
School I	300	5	Available 6 hrs./da. 6 da./wk.
School II	100	20	36 - for 18 wks.
School III	21	5-7	?
School IV	25	25	Daily 25 min./da. for 6 wks.
Category II			
School I	25	?	Daily 2-3 hrs. per wk.
School II	10	5	3 times/wk.
School III	70	20	4 hrs. per wk. for 8 wks.
School IV	13	12	2 hrs./15 wks.
School V	20	8-10	2 hrs./15-30 wks.
School VI	20	0	2 hrs./wk. per sem.
Category III			
School I	10	10	?
School II	?	?	?
School III	20	20	Daily per quarter

V. Voluntary enrollment or referral by scholastic committee and/or instructor.

Category I

School I — Voluntary and referral
School II — Referral*
School III — Voluntary and referral
School IV — Voluntary

Category II

School I — Voluntary and referral*
School II — Voluntary and referral*
School III — Voluntary and referral*
School IV — Voluntary and referral

School V — Referral*
School VI — Voluntary and referral ?

Category III

School I — Voluntary and referral
School II — Referral*
School III — Referral

*Proficiency requirement prior to student teaching.

VI. Responsibility for Reading Program

Category I

School I — Student Counc. Center
School II — English Dept.
School III — Education Dept.
School IV — English Dept.

Category II

School I — Education and Guidance
School II — Education, Guidance, and Com. Skills
School III — Adult Education Dept.
School IV — Guidance
School V — Guidance and English
School VI — Education Dept.

Category III

School I — English
School II — Vocational School
School III — English

VII. Devices and materials used in the Reading Program.

	Category I Schools	**Category II** Schools	**Category III** Schools
Tachistoscopic devices	II, III	I, II, III, IV	I, II
Reading rate accelerators	I, II, III	I, II, III, IV	I, II
Reading films	III, IV	I, II, III, IV	I, II, III
Commercial workbooks	I, II, III, IV	V, VI	II, III
Directed reading	I, II, III	I, II, III	V, VI
Others		IV	

VIII. Phases of Reading Program
Speed and comprehension — all schools in all categories.

Vocabulary and study skills such as outlining, noting details, generalizing, comparison of ideas, etc., — all schools except Schools III and IV of Category I.

How to study — All schools except Schools III, IV, and VI of Category I and Schools I, II, and V of Category II. One state college (No. III) and one private school (No. I) includes this in freshman orientation. One state college (No. II) includes an additional phase — viz. — phonics and word attack skills.

Summary

On the basis of completed questionnaires, it appears that over 600 individuals were enrolled in college self-improvement reading skills programs offered in Wisconsin during the first semester of the 1955-56 school year. Students participated in non-credit, non-fee courses of about fifteen members per class in programs available on both voluntary and referral arrangements. Courses of about 40 clock hours duration were taught by one to three instructors recruited from a number of departments among the various institutions.

In addition to the speed and comprehension phases of the reading programs offered in all institutions, a majority of them included vocabulary and study skills. Tachistoscopic devices and reading rate controllers were the most frequently mentioned aids followed by workbooks and reading films.

A high percentage (92%) of questionnaires was returned, indicating interest in present and future offerings of such courses. They would include (1) programs of self-improvement of reading skills and (2) professional courses preparing for the teaching of reading in secondary schools.

REPRESENTATIVES IN ATTENDANCE AT ANNUAL MEETING 1956

ALABAMA

Hoelscher, Sister Alice Marie
    Sacred Heart College, Cullman
Michel, Sister Mary Loutdes
    Sacred Heart College, Cullman

ARKANSAS

West, J. V.
    Hendrix College, Conway

DISTRICT OF COLUMBIA

Cook, Frances
    U. S. Government, Washington 7
Fulker, Edmund
    The Pentagon, Washington 25
Lusby, Norma E.
    Navy Hydrographic Office, Washington
Mahoney, Eva
    Georgetown University, Washington

FLORIDA

Spache, George
    University of Florida, Gainesville
Thompson, Ailene B.
    Florida State University, Tallahassee

GEORGIA

Swain, Emeliza
    University of Georgia, Athens

INDIANA

Willowby, Lucile
    Anderson College, Anderson

KANSAS

Hinton, Evelyn A.
    University of Wichita, Wichita
Martin, John
    Fort Hays Kansas State College, Hays

LOUISIANA

McElwee, Tandy W.
Northwestern State College, Natchitoches

MARYLAND

Donahue, Robert C.
Naval Ordinance Lab., White Oak

MICHIGAN

Patterson, H. O.
General Motors Institute, Flint

MISSISSIPPI

Lucas, Aubrey K.
Hinds Junior College, Raymond
Staiger, Ralph C.
Mississippi Southern College, Hattiesburg

MISSOURI

Abram, Max L.
Perceptual Development Lab., St. Louis
Bryant, Norman Dale
Perceptual Development Lab., St. Louis
Michel, John
Perceptual Development Lab., St. Louis
Smith, Ruth Rogers
Washington University, St. Louis
Wesner, Max E.
Perceptual Development Lab., St. Louis

NEBRASKA

Johnson, Harry W.
University of Omaha, Omaha

NEW MEXICO

Hope, Clarence
New Mexico A. & M. A. State College, State College
Schulze, H. H.
New Mexico Military Institute, Roswell

NORTH CAROLINA

Sommerfield, Roy
University of North Carolina, Chapel Hill

OKLAHOMA

Burcham, Grace
    Southwestern State College, Weatherford
Driskill, Mattie
    Southwestern State College, Weatherford
Gunning, Thelma
    Eastern Oklahoma A. and M., Wilburton
Gunning, I. C.
    Eastern Oklahoma A. and M., Wilburton
Harris, Louie E.
    Oklahoma State College for Women, Chickasha
Heilman, Arthur
    University of Oklahoma, Norman
Jones, Ernest A.
    Central State College, Edmond
Marsden, Virginia L.
    Oklahoma A. and M. College, Stillwater
Marsden, W. Ware
    Oklahoma A. and M. College, Stillwater
Martin, Mavis
    Eastern Oklahoma A. and M., Wilburton
Spruce, Constance
    Bethany Nazarene College, Bethany

SOUTH DAKOTA

Arnaud, Leonard E.
    University of South Dakota, Vermillion

TEXAS

Armstrong, Jack
    D. C. Heath and Company, Dallas
Bauer, Earl
    Audio Video, Dallas
Bliesmer, Emery P.
    University of Texas, Austin
Brashears, Evelyn
    Mary Hardin-Baylor College, Belton
Briggs, Allen F.
    Sul Ross State College, Alpine
Bush, Guy E.
    Amarillo Air Force Base, Amarillo

Causey, Oscar S.
Texas Christian University, Fort Worth
Craig, Mary Chute
Texas Wesleyan College, Fort Worth
Crenshaw, Troy
Texas Christian University, Fort Worth
Davis, Stanley E.
University of Houston, Houston
Dotson, Elsie J.
University of Texas, Austin
Evans, Leslie P.
Texas Christian University, Fort Worth
Ezell, Frank K.
Sheppard Air Force Base
Firkins, C. J.
Texas Christian University, Fort Worth
Harder, Alliene
Texas Christian University, Fort Worth
Horn, Jeff
Texas Christian University, Fort Worth
Johnson, Ben F., Jr.
Howard Junior College, Big Spring
Kelso, Chester
Sheppard Air Force Base
Lacy, James M.
East Texas State College, Commerce
Marie, Sister Frances
University of Dallas, Dallas
Nielson, Otto R.
Texas Christian University, Fort Worth
Parry, Douglas F.
Texas A. and M. College, College Station
Pratt, Ed
Southern Methodist University, Dallas
Provost, Richard L.
Texas A. and M. College, College Station
Puryeat, John R.
University of Corpus Christi, Corpus Christi

Rouse, Margaret
Texas Christian University, Fort Worth
Scheve, Gerald B.
Lackland Air Force Base, San Antonio
Smith, Hubert D.
Prairie View A. and M. College, Prairie View
Snyder, Lee
University of Texas, Austin
Wallace, Mrs. Carl
Tyler Junior College, Tyler
Worth, Mrs. Myrl S.
Dallas

VIRGINIA

Strawser, Elaine F.
U. S. Government, 4815 Kirby Road, Falls Church

WISCONSIN

McDonald, Arthur S.
Marquette University, Milwaukee

WYOMING

Miller, Yyle L.
University of Wyoming, Laramie